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Al-Hikmah University, Ilorin

Book of Abstracts

Figure 1:

Figure 2:

Book of Abstracts, 2nd KU8 Conference of Universities in Kwara State (KU8Conf2024), Aug. 7 - 10, 2024, Al-Hikmah University, Ilorin, Nigeria

Contents

First Plenary Session / 127

Empowering Sustainable Future: Bridging Universities and Industries for ICT Accessibility, Efficacy, and Digital Literacy in Learning Environments

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Abstract

The frequent use of ICT applications among stakeholders has encouraged the transformation of the physical classroom learning environment into a digital medium. Digital Learning Environment is gradually taking the centre stage in the drive to deliver instructions for learning purpose. Hence, this study examined the accessibility, efficacy and literate levels of teachers for digital learning environment. Three major research questions and two hypotheses were raised to guide the conduct of this study. A researcher-designed questionnaire was designed to collate data of variables under study and it was validated by three Educational Technologists. The reliability was done using Cronbach Alpha on the data collected through a pilot study adopting split-half method and it yielded 0.92. Simple random sampling technique was adopted to select the samples and the sample size for this study was200. The return rate of the questionnaire administered was 193 which signify 96.5%. Frequency count and simple percentage was used to answer all research questions while t-test was employed to analyze the hypotheses. The results showed that teachers have access to ICT application and both the efficacy and literate levels are high. It is then recommended that teachers should be encouraged to explore the ICT applications for an effective digital learning environment.

Keyword: ICT Applications, Digital Learning, Efficacy, Literate Level

First Plenary Session / 90

Nexus Between Teachers Job Performance and Public Secondary Schools Effectiveness in North-Central Nigeria

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Abstract

This study investigated the nexus between teachers' job performance and public secondary schools' effectiveness of in North-central Nigeria. The study adopted the descriptive research design of correlational type. The population for this study comprised 1, 836 principals and 29,210 teachers in all public secondary schools in North-central, Nigeria. Multi-stage sampling technique was used to select 859 respondents, out of which 99 were principals and 760 were teachers. A validated research instrument tagged "Teachers'Job Performance and School Effectiveness Questionnaire (TJPSEQ)"adapted from the works of Nelms (2005) and Sulyman (2021) were used for data collection in this study. Reliability coefficients of 0.68 and 0.75 were realised for the teacher job performance and school effectiveness questionnaire respectively, using Cronbach Alpha. Descriptive statistics of Mean, Standard Deviation, Minimum, Maximum, and Range were used to answer the research question, while Pearson Product-Moment Correlation statistics was used to test the research hypotheses formulated at 0.05 level of significance. The study concluded that there was nexus between teachers' job performance

and public secondary schools' effectiveness in North-central Nigeria. The findings revealed that the level of teachers' job performance (55.22) and public secondary schools' effectiveness (46.74) in North-central Nigeria were moderate respectively, more so, there was a significant relationship between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria (r = .911; df = 826; P < 0.05). The study recommended among others, that government should not relent its efforts in providing enabling environments that would enhance job performance and school effectiveness.
Key Words: Nexus, Teachers Job Performance and Public Secondary Schools Effectiveness

First Plenary Session / **233**

[illegible] THE IMPACT OF STORY AND SPEECH IN RESTRUCTURING OF NIGERIA SECURITY

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ABSTRACT

After going through the historical background of this great country. This paper intends to study The impact of story and speech in Restructuring of Nigeria Security especially and all countries in general.
It should be note that no one claims that Nigeria's traditions were a barrier to Nigeria's progress and its march on the part of civilization in terms of population Nigeria is the largest country in Africa and its population is double the number of residents of the large African countries such as Egypt, Ivory coast and Morocco. This paper proves that Nigeria is considered the richest country in Africa due to its petroleum wealth. It also has mineral resources in large quantities but nevertheless the Nigerians were facing economic, political and federal problems. This paper intends to study speech & story as methodological issues for restructuring in Nigeria to look critically revitalization of speech and story under Nigeria capital development project. The writers of the paper are influenced with the significant of speech and story in comprehension of human languages to serve as methodological issues for restructuring in Nigeria. The paper will finally raise tactics on way to follow in scrutinize and examine problem of teaching, speech and story in our corner so that contemporary students and readers will find them easy to understand apply rules and regulations of these two courses to solve the problem of the country. With this efforts human capital development project will contribute immensely to uplifting the learning Arabic language in our Arabic based schools to be used as methodological issues for our beloved nation restructuring.

First Plenary Session / 79

Religion Diversity in Nigeria, a Neglected Tool for curbing corruption

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Abstract:

The study of religion in its diversity has an important role in fostering interfaith, understanding of other beliefs, promoting dialogue and academic scholarship. It has a profound and everlasting function in modelling the composition of human societies throughout the ages. It is believed that multi religious society with various practices determines the cultural, social, and political background of its adherent. Against this background this paper examined the effects of religiosity affairs of Nigeria and to what extent the adherents of each faith has able to abide by the moral teachings of their scriptures. The Nigeria leadership has often been seen to comprise of corrupt individuals who claim one out of the two foreign and popular religion in Nigeria (Islam and Christianity). To fight corruption would not have been things of problem if each religious teachings are properly imbibed into the minds of every individual of the society the spirits of what he/she believes through its teaching, understanding and effectively implementing it in all our daily activities. More importantly, if the scriptures are allowed to be the tools to administer our government policies. This paper adopts the historical and analytical methods. The study reveals that the religious diversity is a law designed by the creator which cannot be changed. Results also show that the alternative methods using in curbing corruption different from religious motive have not been given a commendable result. It was found that some people are often misguided in the name of Religions about the concepts of corruption so they see nothing bad in involving in the act. This paper argues that religious diversity in Nigeria is a tool to combat corruption.

Key word: Abrahamic, Diversity, corruption, Religion and Islam

First Plenary Session / 114

Artificial Intelligent for the Teaching of Law Programmes

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Abstract

Artificial Intelligent (AI) is fast becoming the major tool for legal research and writing. However, the integration of AI can lead to the unethical practice of students outsourcing their work to AI, as well as the inability of educators to effectively use AI in legal education. The paper discusses the role of AI in the teaching of law programmes and how AI tools can be integrated into legal education while optimising the benefits and surmounting the challenges they pose. This paper adopts a qualitative methodology to draw on existing research and data on the use of AI in legal education. The paper finds that AI has progressed in legal education in areas like legal simulations, adaptive learning paths, automation of legal tasks, legal research, and writing. The paper finds that the integration of AI in legal education can raise several ethical issues. The paper concludes that AI has the potential

to revolutionise the teaching of law programmes by enhancing learning experiences and improving efficiency. The paper recommends that legal education institutions should develop clear policies on the use of AI in learning and assessment and invest in training educators and students on the ethical use of AI.

First Plenary Session / **99**

Religion and Globalization

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ABSTRACT
This paper examines the roles that religion can play in a globalized society. It discusses the major theories and paradigms of religion and global change and brings into focus ways in which such changes can systematically impact on religious values and on the other hand, on the process of globalization. This paper investigates the multifaceted roles that religion plays in a globalized society, focusing on its interaction with global changes which means that, religion takes advantage of communication and transportation technology which is at the same time the source of global nations' greatest resistance by acting as a haven for those standing in opposition to its power. The role of religion in relation to other global phenomena such as culturalism, political-economy, and science and technology. It concludes that although religion does not necessarily determines the direction of globalization, it never the less helps to influence the definitions of the global situation.

First Plenary Session / **14**

Childhood Identity and Contemporary Music in Nigeria

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Abstract

Nigeria's rich cultural genealogy and diverse music have made music an essential part of children's daily lives, permeating various aspects of their social, cultural, and personal experiences. Contemporary Nigerian music reflects societal trends and issues that are related to love, relationships, social justice, and political activism. Through lyrics and imagery, music provides children with a lens through which they interpret their social and cultural environments. This influence can impact children's attitudes towards issues such as gender roles, social imbalance, and civic engagement, molding their identity and worldview in the process. This paper explores the relationship between childhood identity and contemporary music in Nigeria by examining how modern-day music influences children's understanding of societal norms, values, and aspirations. Contemporary music in Nigeria also serves as a form of cultural representation and empowerment for children, celebrating Nigerian culture, heritage, and traditions. Artists incorporate traditional rhythms, languages, and motifs into their music to strengthen children's connection to their cultural heritage and foster a sense of cultural identity and belonging. However, contemporary music in Nigeria presents challenges and controversies regarding its impact on childhood identity. The upsurge of explicit content in the lyrics and videos, including themes related to violence, substance abuse, hypersexualization, materialism, wealth, and success, presents these as markers of social status and achievement. Exposure to such messages through music shapes children's aspirations and self-concept, leading to a desire for material possessions and societal endorsement which can have detrimental effects on

children's perceptions, attitudes, and behaviors. Again, exposure to such content contributes to desensitization towards violence, unhealthy sexualization, and the glorification of negative behaviors. In other to achieve the aim of this research, the researcher uses a qualitative approach of data selection. Two video songs of a notable Afrobeat musician, Portable ; 'Zazu'and 'Clear', while the linguistic and nonlinguistic elements are analyzed using the Identity in relation to the Yoruba cultural context. Findings reveal that the commercialization and commodification of music in Nigeria have led to the prioritization of commercial success over artistic integrity and originality. Many contemporary Nigerian artists produce music that caters to mainstream tastes and trends, leading to the homogenization of music and the marginalization of diverse cultural voices and perspectives which by implication limits children's exposure to the rich diversity of Nigerian music and culture, impacting their cultural identity and appreciation for their heritage. To address these challenges, this research recommends the promotion of media literacy education to equip children with the skills to analyze and interpret music content, promotion of positive and culturally authentic music that celebrates Nigerian heritage and values which will foster responsible content creation in the music industry. By addressing these challenges of childhood identity and contemporary music in Nigeria, stakeholders can harness the prospect of music to enrich children's cultural identity while mitigating its negative influences.

Keywords: Childhood Identity, Contemporary Nigerian Music, Zazu, Clear, socio-cultural influence

First Plenary Session / **36**

A Nexus Between Retention Strategies And Lecturers'Effectiveness In Private Universities In South-West, Nigeria

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Abstract
Retention of academic staff in private Universities in Nigeria has raised deep concern among stakeholders in educational industry. Thus, effective retention measures of competent workforce are fundamental for the actualization of university mandates. The study examined nexus between retention strategies and lecturers'effectiveness in private Universities in South-west, Nigeria. Descriptive research design was adopted. The population of the study comprised 1,921 academic staff in all the 23 private Universities in South-west, Nigeria. Three states were purposively selected for the study, while proportional sampling technique was used to select 565 academic staff. "Retention Strategies and Lecturers'Effectiveness Questionnaire"were used for data collection. The reliability coefficients of the instruments were ascertained using test re-test method of reliability giving 0 .69 and 0 .73 for 'RSQ and 'LEQ respectively. Person product moment correlation statistic was used to test the hypotheses formulated in the study. The findings of the study shown that significant relationship exist between retention strategies and lecturers'effectiveness in private universities in south-west, Nigeria. The study recommended among others that academic staff should be given autonomy to pursue intellectual inquiry related to their areas of specialization without unreasonable restriction, Prominent should be given to inbuilt packages for insurance policies and retirement benefits to keep academic staff fit with socio-economic demand at old age and compensation package of academic staff in private Universities should be enhanced and made relevant to prevailing economic circumstance through periodical review.

Key Words: Nexus, Retention Strategies, Lecturers'Effectiveness and Private Universities

First Plenary Session / **67**

Service Learning as a Catalyst for Social Change in South-West Private Universities, Nigeria

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Abstract

This paper advocates for the integration of service learning as a strategic tool for fostering social change within South-West private universities in Nigeria. Service learning, an educational approach that combines academic instruction with community service, holds immense potential for cultivating socially conscious graduates equipped to address pressing societal challenges. Drawing upon reviews and empirical evidence, this paper outlines the rationale for prioritizing service learning within the curriculum of private universities in South-West Nigeria. It emphasizes the transformative impact of service learning on student learning outcomes, community development, and institutional reputation, positioning it as a key mechanism for advancing the social mission of higher education.

Recommendations for university administrators, faculty members, and policymakers to consider in mainstreaming service learning initiatives were presented. These include integrating service learning into curricular and co-curricular activities, fostering partnerships with local communities and non-profit organizations, providing faculty development opportunities, and establishing mechanisms for monitoring and evaluation. With the opportunities and challenges associated with implementing service learning in the Nigerian context, this paper underscores the importance of institutional commitment, resource allocation, and stakeholder engagement in ensuring the success and sustainability of service learning initiatives.

In conclusion, there is a shift in the educational approach of South-West private universities towards one that prioritizes service learning as a catalyst for social change. By embracing service learning as a core component of their academic mission, these institutions empower students to become active agents of positive change, foster sustainable community development, and contribute to the advancement of the society.

Keywords:

First Plenary Session / **236**

Artificial Intelligence (AI) Enabled Legislative oversight in Nigeria: An Insight from Kwara State House of Assembly

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Abstract

Effective legislative oversight is crucial for ensuring transparency, accountability, and efficient governance in any democratic system. However, traditional methods of oversight often face challenges such as limited resources, information asymmetry, and bureaucratic complexities. This study explores the potential of Artificial Intelligence (AI) in enhancing legislative oversight processes, drawing insights from the Kwara State House of Assembly in Nigeria. Through a qualitative case study

approach, the research examines the current state of legislative oversight in Kwara State and identifies the opportunities and challenges associated with integrating AI technologies. The study investigates how AI-enabled tools and analytics can assist legislators in accessing and analyzing vast amounts of government data, monitoring policy implementation, and detecting potential irregularities or inefficiencies. Furthermore, the study explores the ethical considerations and potential risks associated with AI-enabled oversight, such as privacy concerns, algorithmic bias, and the need for human oversight and accountability. The study also considers the legal and regulatory frameworks necessary to ensure the responsible and effective deployment of AI in the legislative domain.

Keywords: Legislative Oversight, Artificial Intelligence, Governance, Kwara State, Nigeria

First Plenary Session / **132**

Challenges of Project Management and Implementation in Nigeria: A Practical

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Abstract

The study examined the challenges of project management and implementation in Nigeria. Project management and implementation in Nigeria is facing many challenges especially the problem of non-conducive environment. Many projects in Nigeria end up uncompleted, abandoned or unsustainable due to poor management. Also, the implementation of most projects in the country is amalgamated within the normal operational undertaking of organizations that have low capacity to manage such projects. The study obtains its data from secondary sources, such as books, journals, government archival documents, newspapers, magazines, and websites that host related data on project management and implementation. The collected data were examined using a content analysis technique. The study revealed that the challenges confronting project management and implementation in Nigeria is essentially poor funding, corruption, inadequate equipment to execute the projects, absence of technical expertise, poor project analysis, poor capacity to implement the project, economic and political instability, and environmental problems. Based on these challenges, the study concluded that effective project management and implementation in Nigeria had not been significantly achieved as a result of internal and external variables, and some recommendations were proffered to enhance effective management and implementation of projects in the country.

Keywords: Challenges, project management, project implementation, projects.

First Plenary Session / **115**

Marketing Skills Required by Entrepreneurs for Business Sustainability in Ilorin Metropolis.

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Abstract

This study investigated marketing skills required by entrepreneurs for business sustainability in Ilorin metropolis Kwara State. Four (4) research questions guided the study. A survey design was adopted. The population was 550 entrepreneurs registered with Nigerian Chamber of Commerce, Industry, Mines and Agriculture (NACCIIMA) in Ilorin metropolis Kwara State while the sample size of the population was arrived at using krejecei and Morgan (1970) which resulted to a sample size of 226 respondents which were randomly selected using simple random sampling techniques. A-28 item structured questionnaire validated by 3 experts was used for data collection. The pilot study conducted yielded a reliability coefficient of 0.77 which was high enough for the instrument to be considered reliable. Mean and the standard deviation was used to analyze the findings. The findings revealed among others that skills of quality product and pricing skills are highly required by entrepreneurs for business sustainability. Based on the findings, it was recommended among others that in house training should be conducted for entrepreneurs to address skills of quality product for business sustainability.

Key Words: Skill, Marketing Skills, Entrepreneur, Business Sustainability

First Plenary Session / **39**

Costs of Forming a Common Monetary Policy/ Currency and a Single Central Bank in Ecowas

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Abstract

Regional integration is perceived as a way of eradicating mass poverty and enhancing rapid economic growth among member nations. The Economic Community of West African States (ECOWAS) activities includes the preferential treatment of intra-regional trade, transport and communication projects, and monetary integration, among others, are slated for implementation. This study, therefore, offered an integrated analysis of the costs of adopting a common currency in ECOWAS spanning 2001 to 2019. A two-step methodological procedure, based on the Optimum Currency Area (OCA) and the New Optimum Currency Area (NOCA) frameworks, were used to estimate the costs of monetary union in ECOWAS. The behavioural models, capturing the elements of costs, were estimated. The impulse response and variance decomposition within the framework of Vector Autoregression (VAR) as well as the fixed and random effect models within the framework of panel data estimation were used. Statistical significance was at at 5% significance level. The result from the asymmetric shock model showed that in the 1st period, exchange rate responded by 18.08% as a result of a 1-standard deviation shock from terms of trade in the subregion. However, the response declined steadily and stabilized around 3% on average between the 4th and 10th periods. The panel data analysis showed a rise in government revenue will cause money reserve to decline by 0.06 units. It was revealed that even though the cost of a common currency in the ECOWAS sub-region would be high at the initial stages of implementation, largely due to the existence of multiple currency in Anglophone West Africa, the cost elements become lower with time; Thus, in the long-run the cost of adopting a common currency is lower. The study recommended that member nations should fast-track the attainment of the minimum convergence criteria to enable the rapid adoption of a common currency as this will go a long way in ensuring greater monetary integration, exchange rate stability, lower inflation rate, increased trade openness and improved economic growth in the sub-region
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Keywords:

First Plenary Session / **361**

Exploring Sustainable Energy Solutions beyond Fossil Fuels in Nigeria

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ABSTRACT

Nigeria stands at a critical juncture in its development journey, grappling with a persistent energy crisis that hampers economic growth, social progress, and environmental sustainability. Despite being rich in natural resources, including vast reserves of oil and gas, the nation faces chronic power shortages, frequent blackouts, and an overreliance on fossil fuels. However, amidst these challenges lies a promising solution: renewable energy resources. Exploring alternatives for fuel beyond fossil fuels is imperative, this is critical for combating the effects of climate change and lowering our reliance on limited resources. Nigeria possesses diverse resources that could be harnessed for biofuel production, including oil palm, sugarcane, and cassava. The paper explores the socio-economic implications and policy considerations associated with the adoption of alternative energy technologies, emphasizing the need for a balanced and diversified approach to energy transition. It highlights the importance of technological innovation, regulatory frameworks, and investment incentives in overcoming barriers to alternative energy deployment and fostering energy system transformation. Interviews, surveys and questionnaire will be used for the data collection. Using geographic information systems, satellite imagery, and machine learning tools, as highlighted in the context of integrated energy planning. These tools will allow for a data-driven approach to analyze optimal energy pathways, assess electricity demand, and identify suitable sites for renewable energy projects. Shifting towards renewables helps mitigate these environmental impacts, reducing carbon emissions and contributing to a cleaner, more sustainable future.
Key words: Exploring sustainable alternatives, Energy crisis, Renewable energy resources, Bio-fuel, Data- driven approach

First Plenary Session / **5**

Arabic Language, Religion and Globalization

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Abstract

This paper shall look into the impact of Arabic Language, religion and Globalization Arabic Language is an official language or a Semitic language meaning that it is related to an Hebrew, Arabic language is spoken language and the major language of the modern middle east, it is spoken by an estimated 185 million people. It is spread throughout the region. Religion is a range of social cultural systems including designated behaviours and practices, moral beliefs, worldviews, texts, sanctified places, prophecies, ethics or organization. We have four religions, Islam, Christianity, Hinduism and Buddhism. Religion is a set of organized beliefs, practices, and systems that most often relate to the belief and worship. Religion may be defined as the presence of a belief in sacred or the holy. Globalization is the process of interaction and integration among people compares and government worldwide. Globalization means the speedup of movements and exchanges of human beings, goods and services, capital technologies or cultural practices all over. Globalization is the word used to describe the growing interdependence of the world's economics, culture and populations, brought about by cross border trade in goods and services, technology and flows of investment, people and

information countries have built economic partnership to facilitate these movements over many centuries.
Key words. Build culture, integration, modern and people

First Plenary Session / 98

The Role of the Church in Annexing Entrepreneurship Theology for Poverty Alleviation in The Nigerian Society

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Abstract
Poverty implies lack, shortage, deficiency among several others which depicts the state of need of material and capital resources. Poverty in the Nigerian society has brought about underdevelopment and persistent increase in crime rate among the Nigerian youth thus leading to insecurity of lives and properties. The good act of poverty alleviation is a series of actions, plans and or endeavours put in place by the society, individuals and or government to eradicate poverty among the members of the society. As a way of fighting against poverty, the teaching of entrepreneurship has pervaded the church landscape, whereby the church now become a leading personnel in entrepreneurship discourse in the society with the aim of eradicating poverty among church members and the society in general through its' entrepreneurship theology, and skill acquisition programmes. The paper examined role of the church in poverty alleviation in the Nigerian society by annexing entrepreneurship theology among its basic teachings. The study employed historical, descriptive and participatory observation methods. It was discovered that the teaching of entrepreneurship is a common among the 21st century Nigerian churches where members are educated on the importance of being self-independent, self-reliance, self-improvement and ability to make wealth, which are targeted at poverty alleviation. Hence the study recommended that the Nigerian churches should engage in more elaborate programmes such as collaborating with organisations, or firms in the promotion of entrepreneurial theology aimed at poverty alleviation.

Keywords: Church, Entrepreneurship, Nigerian Society, Poverty Alleviation, Theology

First Plenary Session / 11

Influence Of Entrepreneurship Centers On Acquisition Of Entrepreneurial Skills Among Undergraduate Business Education Students In Kwara State.

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Abstract
The study investigates the influence of entrepreneurship centers on acquisition of entrepreneurial skills among undergraduate business education students in Kwara state. Two research questions

along with two hypotheses guided the study. The study adopted a descriptive survey design to conduct the study. The Population of the study comprised 88 undergraduate final year students. Due to manageable size of the population, the entire population was involved in the study. The major instrument for data collection for the study was 20 item structured questionnaire developed by the researcher. Mean and standard deviation were used for the data analysis while the hypotheses were tested using t-test statistical analysis at 0.05 level of significance. The findings revealed that entrepreneurship centres play significant role in the acquisition of entrepreneurial skills among final year undergraduate business education students. And, university system must strive to producing graduates that would be able to function effectively by being self-employed and self-reliant after graduation in order to contribute meaningfully to the economic development of the nation, this will go a long way in reducing high rate of graduate unemployment, insecurity and youth restiveness. Based on the findings and conclusion, it was recommended that Experience entrepreneurs should be invited from time to time to dialogue with students on practical ways and best practices to starting, managing and sustaining any business venture. This will go a long way in development in the students the zeal to venture into entrepreneurship after graduation.

Keywords: Entrepreneurship Centre, Acquisition, Marketing Skills, Business Management Skills

First Plenary Session / **7**

Sustainable Innovation in Startups: Nurturing Entrepreneurship for a Green Future in Nigeria

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Abstract
The paper examined the role of entrepreneurship in fostering sustainable practices within startups and the benefits it can bring to both the environment and the economy. The cross section survey was used. The study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through self- administered questionnaire. The sample size of two hundred (200) was arrived at using the Soper A-priori Sample Size Calculator. The sampling procedure used in this study was the simple random sampling technique. The research instrument was validated by experts in the field of entrepreneurship and approved while the reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics with the aid of SPSS. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The findings revealed that in other to attain a green future, sustainable innovation among startups was instrumental in nurturing and sustaining entrepreneurship. The study recommends that stakeholders and policy makers should explore emerging trends and disruptive technologies that are driving sustainable innovation in startup ecosystems, such as blockchain, artificial intelligence, and renewable energy solutions.
Key words: Entrepreneurship, Government Policies, Green Future, Startups and Sustainable Innovation.

First Plenary Session / **109**

Legal Framework on Climate Change and its Effects on Agriculture and Food Supply in Nigeria

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Abstract

The impact of climate change on agriculture and food supply in Nigeria has been a growing concern in recent years. One of the key challenges faced by the country is the threats to food security due to changes in rainfall patterns, droughts, and other extreme weather events. The aim of this paper is to examine the existing legal frameworks in Nigeria that address the effects of climate change on agriculture and food supply sectors. It focuses on the Climate Change Act of 2021 and the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN). The paper adopts doctrinal research methodology using both primary and secondary sources to carry out a comprehensive analysis on the legal frameworks for the country to achieve its climate goals, social, economic sustainability and resilience. The paper finds that the Nigerian government has implemented various laws and policies to manage the effects of climate change. The Climate Change Act of 2021 provides a framework for achieving low greenhouse gas emission (GHG), inclusive green growth and sustainable economic development. The NASPA-CCN outlines specific measures and targets to achieve climate-resilient agriculture and food systems in the country. The paper concludes that climate change poses a serious risk to agricultural production and food supply in Nigeria. There is a need for a comprehensive legal framework that strives to address the impacts of climate change and ensure food security Thus; it recommends that each state in Nigeria should have a dedicated and incorruptible climate change unit that focuses on the environmental impacts of agriculture and food supply.

Key Words: Climate Change, Agriculture and Food Supply, Climate Resilient

First Plenary Session / **314**

Social and Economic Implications of Delayed Childbearing in Kwara State, Nigeria: A Mixed-Methods Approach

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Abstract:

This study will look into the social and economic ramifications of delayed childbearing in Kwara State, Nigeria, shedding light on the multifaceted dynamics shaping family formation and reproductive decision-making in the region. Employing a mixed-methods approach, qualitative data will be collected through in-depth interviews and focus group discussions with married individuals, healthcare professionals, community leaders, and policymakers, while quantitative data will be gathered through surveys administered to a representative sample of adults in Kwara State. The research will explore the factors driving delayed childbearing, including educational attainment, economic opportunities, urbanization, and changing cultural norms surrounding marriage and fertility. Through thematic analysis and statistical techniques, the study will elucidate the social consequences of delayed childbearing, such as shifting family structures, intergenerational dynamics, and evolving gender roles within households and communities. Furthermore, the research will investigate the economic implications of delayed childbearing, including workforce participation, labor market outcomes, and the long-term sustainability of social welfare systems. Findings from this study will contribute understanding of the complex interplay between social change, demographic trends, and economic development in Kwara State and provide insights for policymakers and stakeholders seeking to address the challenges and opportunities associated with delayed childbearing in the region.

Keywords: Delay child bearing, socioeconomic implication, mixed method.

First Plenary Session / 138

Postgraduate Student☒s Perspective on Curriculum Innovation in Chemistry for Sustainable Development

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Abstract

This study quantitatively explores postgraduate students' perspectives on curriculum innovation in chemistry for sustainable development. A survey was administered to 200 postgraduate chemistry students across various universities in Nigeria. The survey evaluated their views on the integration of sustainability concepts into the chemistry curriculum, the perceived relevance of such innovations to their academic and professional goals, and their readiness to engage with sustainable practices in chemistry. The findings indicate strong support among students for incorporating sustainability into the chemistry curriculum, with 75% of respondents believing it would enhance their understanding of the subject and prepare them for real-world challenges. Additionally, over 80% of participants expressed interest in engaging in research projects and courses focused on sustainable development. The study identified a positive correlation between students' support for curriculum innovation and their enthusiasm for applying sustainable principles in their future careers. The results suggest that integrating sustainable development into chemistry education can foster a generation of chemists equipped to tackle global challenges. Recommendations include further curriculum updates to include sustainability, as well as training for educators to effectively teach these concepts.

Keywords: Chemistry curriculum innovation, Sustainable development, Postgraduate students' perspectives, Educational reform

First Plenary Session / 61

Innovative Curriculum Structure and Sustainable Development in Kwara State Basic Schools

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Abstract

Sustainable development, being a global issue, depends solely on innovative curriculum structures in terms of classrooms, laboratories, libraries, sports facilities, staffrooms, and stores to attain its objectives. The objectives of the study were to find out the relationship between innovative curriculum structure and sustainable development. The study was a descriptive study of the correlational type. The population of the study was 480 school heads, and the sample was 217. A purposeful sampling technique was used to select the respondents. Six research questions were answered, and one hypothesis was tested at a significant level of 0.05. The data for the study was collected using a structured, validated questionnaire titled "Innovative Curriculum Structure and Sustainable Development Questionnaire'(ICSSDQ). The reliability of the instrument was determined with the use of Cronbach alpha, and the coefficient was 0.81. The returned questionnaire was analyzed using descriptive statistics and inferential statistics to test the hypothesis. The major findings revealed that

sustainable development did not experience rapid improvement due to a lack of innovative curriculum structures. The implication of the paper is that sustainable development will be a mirage if the needful is not done in terms of curriculum structure. It was recommended, among others, that the government should provide a standard structure as a matter of urgency.
Keywords: Innovative Curriculum, Sustainable Development, Basic Schools, Classroom Buildings, Food Shortage

First Plenary Session / 375

Repositioning Information and Communication Technology (ICT) for Socio-Economic Growth and Sustainable Development in Nigeria

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Abstract

This paper examined the imperatives of Information and Communication Technology (ICT) as a veritable instrument in the advancement of socio-economic growth and sustainable development. Information and Communication Technology (ICT) has been defined as the diverse set of technological tools and resources used to transmit, store, create, share or exchange information. Sustainable development, on the other hand, aims at finding the balance between economic development, environmental protection, and social well-being. The growing problem of underdevelopment, underemployment, and unemployment in Nigeria can be attributed to the inability of the existing education system to equip the teeming graduates of various educational institutions with adequate technical and technological skills that can enable them to explore the abundant natural resources in the country for socio-economic growth and sustainable development, financial independence, self-employment, job and wealth creation. The imperatives of Information and Communication Technology (ICT) in teaching and learning, when channeled towards socio-economic growth and sustainable development in any technology-driven society, cannot be overemphasized. This study thus examined the place of information and communication technology (ICT) as catalysts for promoting socio-economic growth and sustainable development in various sectors in Nigeria. While adopting the descriptive survey design method, the paper explored the various areas through which the adaptation and repositioning of ICT can lead to the advancement of socio-economic growth and sustainable development in Nigeria. The paper identified some of the potentials, measures, prospects, and challenges of ICT in a technologically driven society leading up to the sustenance of socio-economic growth and sustainable development in the country.

Keywords: Repositioning, ICT, Socio-economic, Growth, Sustainable, Development, Nigeria.

First Plenary Session / 20

Effect Of Caffeine, Camellia Sinensis, And Telfairia Occidentalis On Oxidative Stress And Inflammationin Parkinsonian Female Swiss Mice

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ABSTRACT

Parkinson's disease (PD) is a progressive neurodegenerative condition characterized by dopaminergic neuron loss and concurrent oxidative stress and inflammation within the brain. Recent studiessuggest caffeine, Camellia sinensis (CS), and Telfairia occidentalis (TO) offer neuroprotection against PD. However, their effects on serum oxidative stress and inflammation in PD, especially in female subjects, are underexplored.This study aimed to assess the effects of caffeine, CS, and TO saponin on serum oxidative stress and inflammatory markers in female Swiss mice with 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-induced PD. Forty female Swiss mice weighing between 20-30g were utilized with thirty-five mice receiving MPTP injections intraperitoneally to induce PD. The mice were then divided into eight groups (n=5):Control (received0.2ml of the vehicle), while Groups 2-8 (MPTP-induced PD) received 0.2ml of the vehicle, L-Dopa (10 mg/kg), caffeine (10 mg/kg and 5 mg/kg),CS (400 mg/kg and 200 mg/kg), and TO saponin (100 mg/kg) for 20 days.Serum samples were collected to measure oxidative stress (MDA, SOD, CAT, GSH) and inflammatory (TNF-α, IL-1α) markers. Resultsshowed elevated MDA levels in PD untreated versus treatment groups. SOD, CAT, and GSH levels weresignificantly increased ($P<0.05$) in caffeine, CS, and TO saponin groupscompared to PD untreated. Furthermore, there was a significant decrease ($P<0.05$) in TNF-α, and IL-1α levels across all treatment groups versus PD untreated. Collectively, caffeine, CS, and TO saponin exhibited antioxidant and anti-inflammatory properties in serum in MPTP-induced PD, suggesting their potential as therapeutic agents.

Keywords:Parkinson's disease; caffeine;Camellia sinensis;Telfairia occidentalis; oxidative stress; inflammation

First Plenary Session / 93

Nutraceutical, proximate and pasting properties of water yam flour blended with horse-eye bean flour

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ABSTRACT

Yam flour is a conventional semi-processed food rich in carbohydrate, but low in protein, health-promoting bioactive compounds and their attendant health benefits, limiting its nutraceutical potential. However, these properties may be improved by incorporating under-utilized legumes, rich in protein and bioactive compounds, to the water yam flour. Therefore, the objective of this study was to evaluate the quality (bioactive constituents, antioxidant and starch-digesting enzymes inhibitory activities, proximate composition and pasting properties) of water yam (Dioscorea alata) flour blended with horse-eye bean (Mucuna urens) flour. Water yam and horse-eye bean flours were blended at 97.5:2.5 and 95:5 (w/w) proportions, respectively, with the native water yam (100%) and horse-eye bean (100%) flours as controls. The bioactive constituents (tannins, total phenolics, flavonoids and saponin), antioxidant (DPPH, *ABTS*+-scavenging and reducing power) and starch-digesting enzymes (α-amylase and α-glucosidase) inhibitory activities, proximate composition and pasting properties of the flour samples were determined. The bioactive constituents, crude protein,

antioxidant and starch-digesting enzymes inhibitory activities of the blends increased significantly, as the proportion of horse-eye bean flour increased. The final and setback viscosities, as well as the peak time of the blends also increased significantly, with an increasing proportion of horse-eye bean flour. However, the blends' peak and breakdown viscosities, as well as ash content decreased significantly, as the proportion of horse-eye bean flour increased. Hence, blending water yam flour with horse-eye bean flour could be a low-cost strategy for increasing the blend's protein content, bioactive constituents, antioxidant and starch-digesting enzymes inhibitory properties, suggesting an enhanced nutraceutical potential of the blend.
Keywords: Bioactive constituents, Horse-eye bean flour, Nutraceutical potential, Pasting property, Water yam flour

First Plenary Session / **223**

Integrating AI-Driven Multimodal Discourse Analysis for Enhanced Communication and Motivation Strategies in Business

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Abstract

The dynamism of modern business landscape has proven that effective communication and motivation are key for organizational growth. This research focuses on the combination of artificial intelligence (AI) tools, mainly based on multimodal discourse analysis, to improve communication and motivation strategies in the business world. Due to the nature of multimodal discourse analysis that looks into the interaction between multiple modalities of communication like language, visuals and gestures, it becomes possible to decide on the real meaning and context of a communication act. Utilizing AI technologies, businesses might be able to analyze data from multi-modal information streams in real-time, spotting useful information which may help discover factors that influence employee relationships, sentiment, and engagement levels. The goal is to highlight the importance of using AI-driven methods to understand the intricacies of language and communication in the business world. With sophisticated computer algorithms, AI solutions can detect trends, focus on major subjects and forecast outcomes, and therefore offer entities an opportunity to adjust their communication and motivation strategies accordingly.

Keywords: Artificial Intelligence, Multimodal Discourse Analysis, Communication, Motivation, Business Strategy.

First Plenary Session / **362**

FOOD SECURITY AND GLOBAL AGRICULTURE: HUMAN RIGHTS FOCUS AND CONCERNS IN NIGERIA

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ABSTRACT
This paper examines the relationship between food security and global agriculture and human rights, particularly in Nigeria. It adopts doctrinal methodology and aims at identifying the intrinsic synergy between food security and human rights, the legislative interventions and judicial attitude to food as a right. Food crises have been on the increase globally without Nigeria being an exception. Food crises is used here as signifying challenges to food security in which case majority of the population is faced with risk of extreme hunger. Many households in Nigeria find it difficult to feed themselves with food having the required nutritional values. Many factors are responsible for the situation especially in Nigeria; inadequate or inappropriate agricultural planning and policies, insurgency, terrorism, banditry, kidnapping, farmers-herders conflicts, the entrenched subsistent farming, high cost of modern farming equipments and machineries, demographic issues and corruption, etc. The 1999 Nigerian Constitution guarantees fundamental human rights, and provides for none-justiciable social economic rights. Nigeria, as a member of the African Union domesticated the African Union Charter on Human and Peoples Rights. The paper finds as a fact that except as provided under the African Charter, right to food is unexpectedly and unfortunately not an enforceable right in Nigeria. The paper concludes that unless and until right to food is guaranteed under the constitution, the government may not appreciate the eternal importance of food to the population and the overall human capital, social and economic development.

Keywords: food security, Human Rights, African Charter, Hunan Capital, Economic Development

First Plenary Session / 416

TELEVISION NEWS AND VOICE MODULATION TECHNIQUES AS AI TOOL FOR NEWS ANCHORING: A CONCEPTUAL REVIEW

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ABSTRACT

The last decade witnesses the creation of technological invasion of the media and other areas of life with Artificial Intelligence (AI) world-over. Artificial intelligence technology applies to various fields, and media is not an exception making available news presentation to the satisfaction of the audience. In the broadcast realm AI has been a powerful force in developing new methods of delivering news and information across the digital space as Nigeria is not left behind in the adoption of developmental momentum. What stands out in this is the rapid increase in the rising advent of AI anchors that have a significant impact on the Television stations'content development. Therefore, in this article, we analyze the understanding of Television voice modulation techniques as a digital news anchoring tools in relation to the future directions of AI deployment. The paper addresses the utilization of Artificial Intelligence (AI) tools in broadcast media industry, specifically examining their roles in voice modulation for news production contents. The paper employs historical analytical approach and reviewed recent concepts available in the current scholarly conversation. The paper contributes to the ongoing discussions among media and journalism organizations on the role of AI tools and work environment as well as shedding more lights on various concerns identified by scholars and professionals.

Keywords: Artificial Intelligence (AI, Television, Voice Modulation, New Anchoring, Technology

First Plenary Session / 218

Acquisition of Innovative, Entrepreneurial Skills and Youth Empowerment in Physics Education for Job Creation in Nigeria.

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Abstract:

The paper focuses on the innovative, entrepreneurial skills acquisition and youth empowerment in Nigeria. Nigeria in recent times has been plagued with cases of youth restiveness and vices that has defied several approaches by successive governments to curb also entails focuses on what should be done to bridge the gap between the school and labour market, where the learner/student will work after graduation, so as to be self-reliant in the community. Specifically, this paper discussed: The innovative, entrepreneurial skills and youth empowerment needed in physics education for job creation and the teaching approaches required, the philosophy of education in Nigeria to highlight the roles of science education in the inculcation of right values, knowledge and entrepreneurial skills in youth to enable them contribute effectively to national development. The findings revealed that there are many skills were needed in physics education for job creation, the teachers were required to use practically oriented methods in teaching the students, and a lot of factors posed challenges to the acquisition of entrepreneurial skills and youth empowerment in physics education. Consequently, the paper concluded with some recommendations for the effective entrepreneurial skills acquisition and youth empowerment in physics education for job creation in Nigeria.

Keywords: Physics, Education, Physics Education, Entrepreneurial Skills, Scientific Literacy, Youth empowerment.

First Plenary Session / 219

The Crying Giant Without Tiers: A Critical Realist Perspective To Bridge Gap Between Industry And Academic In The Era Of Ai

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Abstract:

The education sector in Nigeria is one of the largest producers of graduates who have been tested all over the world as fit for purpose as a common representation of quality value. Higher education in particular graduates over three hundred and fifty thousand into the pool of National Youth Service Corps yearly which has saturated the economy's workforce and widened the unemployment gap as the initial purpose of higher education in Nigeria was to train individuals that will fill the ministries, now the ministries are filled. Failure in this mandate had opened a great demand for a paradigm shift from being an ordinary producer to a supportive producer of labor. The era of production for the ministries that had empowered higher education as a giant sector of the economy is gone. Therefore, the need to be innovative and creative in the era of AI has placed a significant responsibility on the sector to integrate problem-solving into its operations by incorporating practical knowledge of industries into academic teaching, learning, and delivery. This position paper adopts a qualitative critical realism approach to unveil the cause of an event (gaps) between the industry and academic

sector. The paper was set to uncover the reality of events that hinder the educational sector from navigating easily into industrial-informed teaching, learning, and delivery. The paper suggested that the education sector needs to understand the changing dynamic of business as the innovation of AI invades the global business landscape even when African countries cannot meet the demand of the economy.

Keywords: Higher Education, Critical Realism, Artificial Intelligence, Emotional Intelligence, Quality

First Plenary Session / 144

A Qualitative Approach of Staff Perceptions on the Potential Benefits and Challenges of Implementing Ai-Powered Student Support Services at Al-Hikmah University

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Abstract
This qualitative study delves into the perspectives of staff members of Al-Hikmah University regarding the potential benefits and challenges associated with the implementation of AI-powered student support services. As artificial intelligence (AI) continues to revolutionize various sectors, including education, there is a growing interest in harnessing its capabilities to enhance student support mechanisms. Through in-depth interviews with a diverse group of staff members, encompassing administrators, faculty, and support staff, this research explores their perceptions on the anticipated advantages and hurdles of integrating AI-powered solutions into the university's student support services. Thematic analysis of the interview data uncovers nuanced insights into the perceived benefits, such as improved accessibility, personalized assistance, and efficiency gains, as well as concerns surrounding ethical implications, data privacy, and potential resistance to change. The findings provide valuable insights for educational stakeholders aiming to navigate the complexities of implementing AI-driven student support services and maximizing their impact on student success and institutional advancement.
Keywords: Qualitative Approach, Staff Perceptions, AI-Powered, Student Support services

First Plenary Session / 65

Addressing Unemployment and Poverty through Entrepreneurship Skills Development: A Focus on Physics Teachers in Nigeria

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Abstract
In light of Nigeria's high unemployment rate, study focused on the acquisition of entrepreneurship

skills among physics teachers in Kwara State to address economic challenges such as unemployment and poverty. The methodology involved a quantitative research strategy, utilizing questionnaires and statistical analysis tools to gather and interpret data from physics teachers in five local government of Kwara State; a survey design was implemented for the study, the sample comprised 100 secondary schools (10 public and private school in each five local governments). Four research questions and four null hypotheses guided the study. The instrument for data collection was closed ended questionnaires. The instrument was validated by three lecturers in the Department of Science Education, University of Ilorin and tested for reliability using Cronbach's Alpha formula and was found to be 0.86 reliable. Data gathered were analyzed using mean, frequency and percentages. Findings indicate that entrepreneurship education plays a crucial role in reducing economic hardship, enhancing workplace flexibility, and increasing social security among physics teachers. The research also reveals that length of teaching experience does not significantly impact perceptions of poverty and violence reduction. Recommendations include the integration of entrepreneurship training in physics education curricula to empower teachers for self-reliance and economic independence. By bridging the gap between pedagogical knowledge and entrepreneurship skills, this study aims to contribute to a more sustainable and prosperous future for physics teachers in Nigeria. It was concluded among others that there is no significant difference in the perception on poverty and violence reduction based on length of teaching experience among physics teachers
Keyword: Unemployment, Entrepreneurship, Poverty, Pedagogical knowledge and Physics Teachers

First Plenary Session / **170**

Adoption Of Modern Technologies In Business Education Curriculum Of Colleges Of Education For Students' Self- Reliance In Kwara State

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Abstract
This study investigated adoption of modern technologies in business education curriculum of colleges of education for students' self-reliance in Kwara state. The study adopted Descriptive survey research design. The population of the study comprises of all public colleges of education in Kwara state. Two research questions were raised along with two null hypotheses which were tested at 0.05 level of significance. The total population of 32 lecturers and 309 NCE 1 Students of Business education were used. Research instrument titled: Adoption of Modern technologies in Business Education Curriculum for Self-reliance Questionnaire (AMTBECSQ) was used for data collection. Content validity of the instruments was censured by the research experts. The results gave reliability coefficient of 0.75, this shows that the instrument is stable and can produce same results over time. The data collected was analyzed using frequencies and percentage distribution for demographic data of the respondents while Frequencies, percentage mean and standard deviation were adopted to analyze the research questions. Independent t-test statistic was used to test null hypotheses at (0.05) level of significance. The findings revealed that modern technologies can enhance effective teaching and learning of Business Education curriculum for students' self-reliance. Based on the findings of the study, it was recommended that, the curriculum of business education in COEs should be enriched to include topics in information and communication technology, data management, web page design among others at all level or classes. This will help enrich the knowledge and the skill base of the students during training and prepare them adequately for the world of work.

Keywords: Modern Technology, Business Education, Self-reliance.

First Plenary Session / **139**

Advancing Diversity and Inclusion in Science Education: Exploring Effective Strategies

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Abstract

This study investigated the implementation of effective strategies to advance diversity and inclusion in science education. Through a qualitative approach, the research examined the experiences and perspectives of students, teachers, and administrators in various educational settings. Through in-depth interviews and thematic analysis, the research explores effective approaches employed by educators and institutions to promote diversity and inclusivity in science classrooms. This approach revealed key challenges faced by underrepresented groups, such as cultural barriers, lack of representation, and limited access to resources. The study also explores innovative approaches, including culturally responsive teaching, mentorship programs, and inclusive curriculum design. These strategies demonstrate the potential for fostering a more equitable and supportive learning environment. Participants highlight the positive impact of these initiatives on student engagement, retention, and academic success. The findings suggest that a multifaceted approach, tailored to the unique needs of each educational context, is essential for promoting diversity and inclusion in science education. Recommendations are provided for educators, institutions, and policymakers to enact meaningful change that can enhance equity and representation within the field.

Keywords: Diversity and inclusion, Science education, Culturally responsive teaching, Mentorship programs, Inclusive curriculum design

First Plenary Session / **334**

Energy optimization in Smart Grids with Deep Reinforcement Learning

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ABSTRACT:

The escalating complexity, uncertainty, and data volumes in energy systems have rendered conventional methods ineffective in addressing decision-making and control challenges. As a result, data-driven approaches have become a crucial focus area. Deep reinforcement learning (DRL) represents a significant breakthrough in data-driven technology, earning its reputation as a true form of artificial intelligence (AI). By combining the capabilities of deep learning (DL) and reinforcement learning (RL), DRL gives rise to a robust and adaptive approach that excels in complex decision-making and control scenarios. With its successful applications in various domains, DRL has been increasingly applied to optimize energy systems, including energy management, demand response, smart grids, and operational control. This paper provides a thorough review of DRL's fundamental principles, models, and algorithm, followed by an in-depth exploration of its applications in energy optimization. Furthermore, the paper discusses recent breakthroughs in DRL, including its integration with traditional methods, and examines the opportunities and challenges of its applications in the energy sector.

Keyword: Deep Reinforcement Learning(DRL),Data-Driven Approaches, Artificial Intelligence, Energy Management, Reinforcement Learning, Deep Learning, Energy System.

First Plenary Session / **176**

Comparison of LASSO and Elastic-Net Variable Selection Performance on Highdimensional Data with Count Respons

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Abstract
High-dimensional data in this paper refers to a dataset with higher number of predictors than the sample
size. Feature selection from high-dimensional data is a crucial task in statistical modelling. The data used
in this paper was obtained from the 2018 Nigeria Demographic and Health Survey (NDHS) with 220 respondents and 269 predictors. The predictors comprise of metrical and categorical variables identified
in the 2018 NDHS as potential predictors of the response variable (Total Children Ever Born).The respondents were randomly selected from the six geo-political zones of Nigeria using proportional allocation of stratified sampling. Variable selection performances of LASSO-Least Absolute Shrinkage
Selection Operator and Elastic Net were compared at k = 4, 5 and 10 cross-validation folds. Findings revealed that the data shows a right-skewed distribution of number of children ever born i. e. fewer number of women gave birth to high number of children. Moreover, the higher the value of shrinkage
parameter, the lower the number of features selected. Also, factors such as age at birth and age at first
marriage, place of residence, knowledge of contraceptive, husband occupation, religion, husband's desire
for more children, women empowerment, women level of education and their wealth index contribute
significantly to the total children ever born. Moreover, 10-fold cross-validation gives the best results in
terms of minimum error (deviance). Lastly, despite the criticism against the LASSO as an inconsistent
method of variable selection, the number of predictors selected by LASSO is not significantly different
from that of Elastic Net.
Keywords: TCEB, High-dimensional, LASSO, Elastic-Net, Nigeria, Poisson

First Plenary Session / **71**

Alleviating the Epileptic Power Supply in Nigeria Using AI-Enabled, Transparency-Enforcing System for Government and Stakeholders

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Abstract
Access to energy is fundamental to development goals worldwide. Difficulties for the energy sector globally include increasing consumption, inefficiency, shifting supply and demand trends, and a lack of analytics necessary for effective management. Nigerian power system has a number of unique challenges, including corruption (the principal challenge), inadequate electrical supply, outdated tools and appliances, inadequate engineer capacity, and unfinished and unending infrastructure repair. Also, the indifference attitude of government to the pain of the citizens, resulting in lip-service priority being paid to the sector is another problem. One major problem however is the lack of a mechanism to evaluate the investment of the government in the sector. Often we hear of billions of naira or dollars that are being spent on the electricity grid on a yearly basis with little or nothing to show for it. Luckily, a gradual and systematic move from conventional mode of operation to technologies-driven system has commenced which include; smart metering, distributed generation and management. As a result, it is crucial to conduct research, make investments, and enhance this sector. This study is proposing a solution that would leverage the application of artificial intelligence (AI) and similar technologies that enable communication between smart grids, smart meters, and Internet of Things devices in the power sector. This solution would aid in enhancing transparency, efficiency, and power management and possibly proliferate the use of renewable energy sources.
Keywords: Power Supply, Alleviating, Engineering Curriculum and AI-enabled-Solution

First Plenary Session / **13**

Interfaith Dialogue and Understanding: A Possible Consequence of Arising Single Faith Schools In Ilorin Metropolis, Kwara State

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Abstract

The rise of single faith schools in Ilorin Metropolis, Kwara State, Nigeria, may have unintended consequence in a very diverse country like Nigeria where religion matters remain very sensitive and can greatly impact interfaith understanding. This study examined the impact of single faith schools on pupils'interfaith understandings. The research investigates whether exposure to single-faith school environment fosters interfaith understanding or reinforces religious boundaries. Descriptive, survey research design was used. 174 pupils were selected for this study from privately owned single faith and conventional schools using stratified sampling technique. Rating scale was used as the research instrument. One research question and three hypotheses were formulated and tested at 0.05 level of significance. The findings revealed that pupils from single faith school have low level of interfaith religion understanding. Also, there was significant difference in interfaith religion understanding of pupils'based on gender. The researcher therefore recommends that the unintended consequences of the raising numbers of single faith schools in the metropolis should be evaluated as Nigeria remains a country which is largely still sensitive to religion issues. Also, single faith should make deliberate effort to teach and promote interfaith dialogue in their schools and the country need all her citizenries to understand and be tolerant to other religions.

Key Words: Primary Education; Interfaith, Religion Tolerance, Child Development.

First Plenary Session / **245**

Design of off-grid Solar Power System to Resolve Energy Poverty in Small Scale Businesses

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Abstract

Energy poverty is a brick-wall between man and prosperity, more especially in this modern time that is driven by technology. In Nigeria for instance, electricity generation has been kept far below 10, 000 MW and citizens would require above 250,000 MW to meet up with their electricity demand. Regrettably, a major fraction of the power generated is driven by fossil fuels. In order to guarantee emission-free, affordable and sustainable electricity in Nigeria, there is need to embrace solar as an alternative energy source. Solar energy exists freely in nature, it is abundant and inexhaustible. The study is therefore aimed at designing an effective off-grid solar power system for small-scale business enterprise as a case study in north-central Nigeria. HOMER was used to simulate and optimise different system configurations. The optimisation report showed that system combination of a photovoltaic solar module, a diesel generator, strings of battery and a controller is the best for the region, providing unit cost of energy as low as $0.017, 0.021, 0.022, 0.020, 0.019, 0.017$ and 0.018$ for Abuja, Benue, Kogi, Kwara, Nasarawa, Niger and Plateau respectively. It is noteworthy that excess electricity was produced which could be sold out to serve other load demands. Hence, the study concluded that the abundant solar energy resources in the region guarantees an enabling environment for the inclusion of solar energy technologies in generating clean, cheap and sustainable electricity.

Keywords: Electricity, HOMER, Off-grid, Renewable energy, Small-scale business

First Plenary Session / **247**

Impact of Foreign Direct Investment on Agricultural Output in Nigeria (1981-2021)

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ABSTRACT

The study examines the effect of foreign direct investment on agricultural output in Nigeria. Cobb-Douglas production function was used as the theoretical framework. Based on the result of unit root test, using Augmented Dickey Fuller, the study adopts autoregressive (ARDL) bound test. Result from the ADRL test shows that there is a long-run co-integration among the variables. Thus, long-run cointegrating regression is used to examine the effect of foreign direct investment on agricultural output with annual data set covering 1981 to 2021. Estimates based on the Cointegration show that capital and labour employed in agricultural sector have positive significant effect on agricultural output, while agricultural foreign direct investment inflows have no significant effect on agricultural output. Based on the results, the study recommends the following measures: First, government should evolve a policy which aims at inducing young people to remain in the rural areas

and work on the farms. Secondly, government should ensure continuous availability of capital for every individual that has interest in farming so as to increase agricultural output. Lastly, government should investigate why foreign direct investment in the agricultural sector has no significant effect on agricultural output.

Keywords: Foreign Direct Investment, Agricultural Output

First Plenary Session / **140**

Perceived Usefulness and Ease of Use Of Gpt Technology in Enhancing Students and Academic Staff Creativity in Management and Social Science: A Case of Thomas Adewumi University

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Abstract

This study investigates the overall relationship between respondent's perceptions and attitudes towards GPT technology and the perceived enhancement of creativity among students and academic staff in management and social science disciplines. The Technology Acceptance Model (TAM) was employed to explore the opinions of students and academic staff on the perceived usefulness and ease of use of GPT technology in enhancing their creativity. Methodologically, the study adopted a survey research method, with the aim of analyzing data collected from a statistically sampled 95 respondents from all departments in the Faculty of Management and Social Sciences. The data instrument was developed with the help of Google Forms and distributed online to the sampled respondents in order to gather their responses. By examining the data through statistical analysis using Partial Least Squares-Structural Equation Modeling, this study aims to accept or reject the research hypotheses. The significance of the research dwells in its potency to provide an understanding of the potential of GPT technology in enhancing creativity in academic settings and also, to inform the integration of technology into teaching and research practices. While specific findings are forthcoming, we anticipate that the study will contribute meaningful insights into the relationship between academic staff and students'perception of GPT technology in enhancing their creativity.

Keywords: ChatGPT, TAM, Perceived usefulness, Perceived ease of use.

First Plenary Session / **73**

Awareness Level of Intervention Programmes in Curbing Herders-Farmers Conflict and Food Security in Nigeria

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Abstract

The concept of conflict has remained inevitable in every society. Been a form of social interaction whereby agents strive to get limited resources by eliminating or weakening their contenders. This has posed serious challenges to every society where Nigeria is not an exemption. The herders-farmers conflict which has impacted the food security of the nation has continued to draw both governmental and non-government attention in curbing the impact on the society. This work gathers demographic data on the level of awareness of government intervention programmes in resolving herders-farmers conflict in North-Central Nigeria. The primary source of data were generated from 759 survey respondents, equally collected from two states in the North Central geopolitical zone. The descriptive statistics was used for the interpretation of the empirical data in a statistical form. Tables were used to present the data in a logical manner for concise understanding and interpretation. The study was able to establish the level of awareness of the programmes in order to assess the effectiveness of the intervention thereby enhancing policy development. The result also helps in knowing the best channel of communication in creating awareness of government programmes. Availability and free access to the information in this data article will facilitate the timely attainment of the 2030 United Nations Sustainable Development Goals (SDGs), especially as it relates to food security, peace and justice in Nigeria.

Keyword: Conflict, Awareness, Intervention-Programmes, Herders, Farmer

First Plenary Session / **91**

Enhanced Ratio and Product Estimators in Simple Random Sampling

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Abstract

In sample survey, auxiliary variable is used to improve the precision of an estimator. In this study some Estimators in simple random sampling were modified and compared with some existing related estimators.
The modified Ratio ($\bar{y}$_ER) and Product ($\bar{y}$_EP) were obtained using an arbitrary constant(α) and the conditions of efficiency for the modified estimators over existing ones were also derived theoretically. Two sets of data from previous journals (secondary data) were used to test for the empirical efficiency of the modified estimators over existing ones. The Bias and MSE of the proposed estimators were derived and compared with that of other related existing estimators empirically. Hence it is contingent that the suggested modified ratio and product estimators demonstrated high relative efficiency over related existing estimators. Convincingly, the modified estimators are enhanced version of the related existing ones.

Key words: Sample, Bias, Auxiliary, Mean Squared Error, Estimator.

First Plenary Session / **85**

Impact of Spin Speed Variation and PEG Surfactant on Zinc Oxide (ZnO) Thin Film Properties

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Abstract

Zinc oxide (ZnO) thin films have attracted a great deal of interest due to their diverse applications in optoelectronics, electronics, and photocatalysis. The influence of spin speed variation and polyethylene glycol (PEG) surfactant on the properties of ZnO films fabricated via a sol-gel spin-coating technique on glass substrates was investigated. The spin speeds were varied from 1000 to 4000 rpm to modify the film layer thickness and PEG surfactant was incorporated into ZnO colloidal solution. Moreover, the influence of incorporated PEG surfactant on film surface morphology and optical behavior was analyzed. The surface profile and optical characterization of the spin-coated films were studied using a scanning electron microscope (SEM), and UV-visible spectrophotometer respectively. It is observed that spin speed variation significantly influences film thickness, with higher speeds leading to thinner films. Besides, films spun at higher speeds (4000 rpm) exhibit optimal optical transmittance, reduced absorbance, and a higher band gap (3.7 eV). The incorporation of PEG surfactant promotes the nucleation formation and growth kinetics process of ZnO nanoparticles, resulting in improved film interfacial area and enhanced optical properties. This study provides innovative means of fine-tuning the ZnO film's optical behavior and surface properties for specific applications.

Keywords: PEG, Additives, Surfactant, Optical band gap, Morphology.

First Plenary Session / **10**

DIGITAL Transformation for Sustainable Impact

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Abstract:
The integration of digital technologies into various aspects of human endeavours has brought about great transformations, offering new opportunities for addressing pressing sustainability challenges. This paper examines the role of digital transformation in driving sustainable impact across different sectors. It investigate the potential of technologies such as artificial intelligence, block chain, Internet of Things (IoT), and big data analytics to optimize resource utilization, minimize environmental footprint, and promote social responsibility. Through case studies and analysis, this paper shows how organizations can use digital transformation strategies to achieve sustainability goals while enhancing operational efficiency and creating new value propositions. It also discusses the importance of stakeholder collaboration, regulatory frameworks, and ethical considerations in ensuring that digital transformation initiatives contribute positively to sustainable development. By embracing digital transformation for sustainable impact, businesses, governments, and communities can pave the way for a more resilient, inclusive, and environmentally conscious future.

KEY WORDS digital, transformation, sustainable, and impact.

First Plenary Session / **128**

Leveraging Artificial Intelligence for University-Industry Sustainability and Creativity

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Abstract

The rapid advancement of Artificial Intelligence (AI) has transformed various industries, making it imperative for academia and industry to collaborate effectively to sustain innovation and creativity. However, despite the growing recognition of the importance of university-industry partnerships, there remains a significant gap in understanding how such collaborations can be optimized to foster sustainability and creativity in AI development. This study examined the relationship between leveraging Artificial Intelligence and university-industry sustainability and creativity in Nigeria. A structured survey was used to gather quantitative data for the study. The lecturers in Nigeria's public universities were the target population. SPSS and SmartPLS tools were used to analyze the data. The findings suggest that university-industry sustainability and creativity are significantly influenced by effective leveraging of Artificial Intelligence, such as energy management, resources management, and curriculum management. The study's conclusions show that energy management, resources management, curriculum management, university-industry sustainability, and creativity have a good and significant association. According to the study, to achieve effective university-industry sustainability and creativity, government and school administrators should pay adequate attention to energy management, resources management, and curriculum management.

Keywords: energy management, curriculum management, long-life learning, resources proficiency

First Plenary Session / 159

Synthesis, Computational Modelling, Single Crystal X-Ray Diffraction Studies, And Biological Activities Of Ternary Copper(II) Complexes Containing Glycine And Nitrogen-Donor Ligands

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Abstract

Two mixed-ligand copper complexes, [Cu(gly)(bpy)Cl].2H2O(1) and [Cu(gly)(phen)Cl].2H2O (2)have been synthesized and characterized by spectroscopic techniques. The structuralconfirmation of (1)has been carried out by single-crystal X-ray crystallography. DFT calculations were carried out on the complexes and the ligand using the B3LYP/631-G(d) level of theory. The geometrical optimization parameters, molecular electrostatic potentials and molecular reactivity's descriptors such as: the

HOMO-LUMO energy gap, ionization energy, electron affinity, electronegativity, electrophilicity and chemical potential were evaluated The effect of the solvent used for crystallization is evident in the higher values for most reactivity's descriptors in solvent with HOMO-LUMO energy gap values of 1.667eV and 0.135 eV for[Cu(gly)(bpy)Cl].2H2O and [Cu(gly)(phen)Cl].2H2O complexes respectively.The complex [Cu(gly)(bpy)Cl].2H2O(1)belongs to the monoclinic space groupP21/C. The geometric parameter "⊠ is 0.0658 for [Cu(gly)(bpy)Cl].2H2O(1); thus, it is closer to square pyramidalin geometry. The ligands 2,2'-bipyridine and glycinate occupied the basal plane, and the chlorine ligand was at the apical position. The antimicrobial activities of free ligand andthe mixed ligand complexes were screened by disc diffusion method. It is found that the metalcomplexes have higher to moderate antimicrobial and antifungal activity than the free ligand against the tested organisms.

Keywords: Ternary complex; Cu(II) complex; N,N-ligands; DFT; Biological studies

First Plenary Session / **368**

Interfaith Dialogue: A Pathway to Sustainable Peace

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Abstract
In an increasingly interconnected yet divided world, the quest for sustainable peace necessitates innovative and inclusive approaches. Interfaith dialogue has emerged as a vital mechanism for bridging religious divides and fostering mutual understanding. This paper delves into the potential of interfaith dialogue to serve as a pathway to sustainable peace, framed by Social Capital Theory and Conflict Transformation Theory. By analyzing a wide array of secondary sources, both published and unpublished relevant materials were employed, the study investigates how interfaith interactions can build social networks, enhance trust, and transform conflicts rooted in religious differences into opportunities for cooperative engagement. The paper underscores the role of interfaith dialogue in creating social capital that strengthens communal ties and supports peaceful coexistence. One of the challenges encountered in interfaith dialogue involves entrenched biases, the manipulation of religious feelings for political purposes, and the intricacies of theological distinctions. These difficulties have the potential to impede progress and generate friction within dialogue initiatives. Recommendations include integrating interfaith dialogue into educational and community programs, promoting policy initiatives that encourage religious inclusivity, and empowering local leaders to facilitate meaningful interfaith exchanges. Through these measures, interfaith dialogue can serve as a fundamental element in striving for enduring peace within diverse and intricate socio-political environments.
Keywords: Interfaith, Dialogue, Pathway, Sustainable, Peace,

First Plenary Session / **146**

International Public Sector Accounting Standards (IPSAS) Implementation and Financial Reporting: Issues and Challenges in Kwara North, Nigeria

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Abstract

The implementation of International Public Sector Accounting Standards (IPSAS) represents a significant shift towards transparency, accountability, and comparability in financial reporting within the public sector globally. However, the adoption and adherence to IPSAS pose numerous challenges, especially in developing regions like Kwara North. This paper examines the issues and challenges associated with IPSAS implementation and financial reporting within Kwara North, Nigeria. The population of the study consists of accountants, auditors, and cash officers in in local governments, and agencies in Baruten, Edu, Kaiama, Moro, and Patigi Local Government Area of Kwara State, while the sample size consisted of 150 financial team selected from 5 local governments within Kwara North using the stratified sampling technique. The Analysis of Variance (ANOVA) was used for the hypothesis test. The results showed that the key issues hindering effective IPSAS implementation and financial reporting in Kwara North include; lack of awareness of IPSAS requirements or the importance of standardized financial reporting, limited financial resources and capacity to implement IPSAS, political interference where many local government officials face pressure to manipulate financial data for political gain, undermining the integrity of IPSAS implementation, and inadequate infrastructure and technological constraints, such as unreliable internet connectivity and outdated software systems, also hinder the adoption of IPSAS-compliant accounting practices.

Keywords: IPSAS, Financial Reporting, Challenges, Implementation, Kwara North.

First Plenary Session / **111**

Antimicrobial Efficacy of Petroleum Ether Extract of Mahogany Bark on Selected Clinical Isolates

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Abstract Antimicrobial resistance is a problem that many researchers and health scientists are grappling with, necessitating the development of new antimicrobial drugs. This study was carried out in order to determine the antibacterial activity of the bark of Khaya grandifoliola (Mahogany) using using petroleum ether. Antibacterial activity of K. grandifoliola was tested against six (6) clinical isolates (Candida albicans, Escherichia coli, Klebsiella pneumoniae, Streptococcus pneumoniae, Staphylococcus aureus and Pseudomonas aeruginosa) using Agar well diffusion method. Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were also determined. All the tested clinical organisms were resistant except S. aureus which was susceptible at concentrations ranging from 1000 mg/ml, 500 mg/ml to 250 mg/ml with zones of inhibitions ranging from 13.75 mm, 13.50 mm and 8.75 respectively. The extract has MIC value of 250 mg/ml against the susceptible organism with a bacteriostatic effect. Phytochemical analysis showed the presence of glycosides, oxalates, steroids, alkaloids, tannins, flavonoids, phenol, triterpene, saponin and phytate while terpenoid was absent in the plant. It can be concluded from this research work that the petroleum ether extract of Khaya grandifoliola bark is slightly effective owing to the use of a moderate extractant which might have masked some effects of the phytochemicals present.

Keywords: Antimicrobial, Khaya grandifoliola, phytochemicals, bacteriostatic, extractant.

First Plenary Session / **26**

Shelving Educational Research Findings: A Threat To Innovation In Nigeria Education Industry

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Abstract

This study explores the threat posed by neglecting educational research findings to Nigeria's education sector. It specifically delves into the barriers hindering the effective use of research findings for innovation within the industry and proposes strategies to overcome these barriers. Employing a Descriptive Survey design, the study randomly selected lecturers ranging from lecturer one to professor at the University of Ilorin. Data was collected using a researcher-designed questionnaire called the "Shelving Educational Research Findings Questionnaire" (SRFQ), exhibiting a Cronbach's Alpha reliability coefficient of 0.73. Data analysis was conducted using descriptive statistics. Results indicate that the primary barriers to utilizing research findings for innovation include inaccessibility of research findings, organizational factors, and inadequate research funding. Moreover, conducting training workshops/seminars to communicate and demonstrate research findings to stakeholders emerged as the primary strategy to enhance the utilization of research findings for innovation. The study recommends fostering collaboration between researchers and end users and establishing robust networks for disseminating research findings to address these challenges.

Keywords:Shelving, Research Findings, innovations, data and educational

First Plenary Session / **131**

Adsorption of Cu (II) from aqueous solutions using composite biosorbent derived from Cabbage and Unripe Plantain Peels

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Abstract

This study investigates the adsorption performance of locally derived agricultural waste mixture of cabbage and unripe plantain peels for removing heavy metals from aqueous solution. The biosorbent was prepared by mixing variable ratios of dried cabbage and unripe plantain peels. The prepared adsorbents were characterized by some physico-chemical and spectroscopic methods. The instrumental techniques used for characterizing the adsorbents include Fourier Transform Infrared (FTIR), X–ray Fluorescence (XRF) and Scanning Electron Microscopy (SEM).The comparative adsorption of Cu (II) ion from aqueous solution onto the adsorbents was investigated using batch adsorption experiment at room temperature. The effects of initial metal ion concentration, contact time and pH were examined. The SEM micrographs shows a structure like a clustered agglomerate with a pattern of hollows and ridges, while the XRF shows abundance oxides of calcium and traces of magnesium, silicon and aluminum. The result showed maximum quantity adsorbed of Cu (II) ions at 391mg/g was achieved with 90:10 of cabbage and unripe plantain peel at a concentration of 900 mg/L within 150 minutes. The adsorption of Cu (II) on the adsorbents best fitted the Langmuir adsorption isotherm

with a regression coefficient of 0.994. The result obtained revealed that cabbage and unripe plantain peels composite are favourable adsorbents, which are economical and affordable for the clean-up of heavy metal contamination, rather than constituting environmental pollution.

Keywords: Adsorption, Copper ion, Cabbage, Plantain peels, Composite.

First Plenary Session / **344**

Soil suitability assessment of a typic metropolitan ranch at Ilorin, Kwara State

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Abstract:

Resource competition conflict within sedentary communities are global issues which can be ameliorated through town and gown sustainable agricultural practices. Consequently, soil characterisation and suitability assessment study was conducted at a metropolitan cattle ranch in Ilorin, Kwara State. The study entailed two phases: soil survey/mapping and laboratory analysis. Soil survey and mapping employed both reconnaissance and GIS/remote sensing for the identification and delineation of sample size and units while soil parameter evaluation for pH. Texture, water holding capacity and nutrient content were conducted using standard laboratory procedures. Soil texture of the soils varied between sand to sandy loam while parameters of the nutrient analysis were generally very high –exchangeable calcium, magnesium and potassium ranged between 4.79 -10.51; 3.70-3.91 and 3.98 -8.52 cmol kg-1, respectively. Stratified units evaluated for current and potential suitability for pasture/fodder trees showed that the soils are currently not suitable (N), attributable to severe fertility issues and limited soil physical (soil structure and permeability) properties. However, with good management, the fertility constraints could be ameliorated, thus, making the soils marginally (S3) to moderately suitable (S2) since soil physical and some climatic variables are more static and persistent, which would not make the soils highly suitable for pasture/fodder crops production. Collaboration between universities and urban areas would promote eco-friendly and social responsible grazing methods thereby mitigate resource competition conflicts, improve overall well-being of sedentary communities, enhance livestock management and animal welfare, and contribute to global sustainability.

Key words: pasture management, remote sensing, soil characteristics, suitability evaluation, sustainability

First Plenary Session / **311**

Religion and Resource Scarcity in West Africa: Exploring the Hardship Of Adherents and the Contribution of their Beliefs

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Abstract:

West Africa faces significant resource scarcity, exacerbating poverty, hunger, and social unrest. Amidst this crisis, religion plays a vital role in shaping the lives of millions. This study investigates the intricate relationship between religion and resource scarcity, examining how adherents cope with hardship and how their beliefs contribute to sustainable resource management.
Through a mixed-methods approach, combining surveys, interviews, and case studies, we explore the experiences of adherents from diverse religious traditions, including Christianity, Islam, and traditional African religions. Our research reveals that religious beliefs and practices significantly influence coping strategies and resource management decisions. Adherents often rely on religious coping mechanisms, such as prayer and faith, to navigate scarcity. However, these beliefs also foster resilience, community support, and environmental stewardship.
Our findings highlight the critical role of religious leaders and communities in promoting sustainable resource management and environmental conservation. We identify key factors, such as religious education, community engagement, and cultural norms, that shape the relationship between religion and resource scarcity. By exploring the intersection of religion and resource scarcity, this study contributes to a deeper understanding of the complex dynamics between faith, culture, and environmental sustainability in West Africa. Our research informs the development of culturally sensitive and effective resource management strategies, empowering local communities to address scarcity and promote sustainable development.

First Plenary Session / **49**

A Sociolinguistic Analysis of Nigerian Pidgin among Undergraduates of Ojaja University

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Abstract

Nigerian Pidgin has not just affected the spoken English of undergraduates, it has extended its tentacles to their writings. Examining the socio impetuses behind it usage will help put researches on the effects of pidgin on students' academic performance into proper perspective. The major aim of this paper is to make a sociolinguistic analysis of the use of Nigerian Pidgin English among the undergraduates of Ojaja University on the university campus using Dell Hymes' ethnography of communication as a framework. A tape recorder was used to randomly record conversations of the students in different parts of the university. Purposive sampling method was used to select five of the conversations used for the analysis. The study discovered that the students use Nigerian Pidgin more in areas outside the classroom environment. The research however recommends that students should reduce their usage of pidgin on campus to mitigate its negative effects on their spoken and written English.

Keywords: Nigerian Pidgin, undergraduates, spoken English, written English, Ojaja University

First Plenary Session / **41**

Current Innovations and Trends in Communicative Language Teaching and Testing (Cltt)

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Abstract

We learn a language for the purpose of communication. This will lead to the problems of questioning language class-room instructions and activities of what to teach; how to teach; with what to teach; and in which way to teach as well as the issue of to what extent is level of learners'communicative achievement. To provide solutions to these problems, this paper seeks to identify communicative competence as the goal of language teaching. Furthermore, it explores current innovations and trends in Communicative Language Teaching and Testing (CLTT); and resources for facilitating communicative competence in the learners. It also identifies some problems Communicative Language Teaching and Testing (CLTT) and relevant solutions are recommended for the problems.

Key word:

First Plenary Session / **166**

Assessing the Challenges and Opportunities of Implementing Electronic Financial Reporting Systems in Nigeria

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Abstract

Electronic Financial Reporting (EFR) systems have gained increasing prominence globally as a means to enhance transparency, accountability, and efficiency in financial reporting processes. In Nigeria, the adoption and implementation of EFR systems present both challenges and opportunities for financial reporting stakeholders. This research explores the challenges and opportunities associated with the implementation of EFR systems in Nigeria's financial reporting landscape. The study employs a qualitative research approach, utilizing interviews and document analysis to gather data from key stakeholders, including regulatory bodies, financial institutions, and technology experts. The findings reveal several challenges hindering the effective implementation of EFR systems in Nigeria, including inadequate technological infrastructure, limited digital literacy among users, regulatory complexities, and security concerns. Despite these challenges, the research identifies significant opportunities that EFR systems offer, such as improved data accuracy, timeliness in reporting, cost reduction, and enhanced decision-making processes. The study highlights the need for a coordinated approach involving collaboration among stakeholders, regulatory reforms, capacity building, and cybersecurity measures to address the challenges and harness the opportunities presented by EFR systems in Nigeria. The research contributes to the existing literature by providing insights into the unique challenges and opportunities of implementing EFR systems in the Nigerian context. The findings are expected to inform policymakers, regulatory bodies, and financial institutions in Nigeria on strategies to enhance the successful adoption and implementation of EFR systems, ultimately contributing to the overall improvement of financial reporting practices in the country.

Keywords: EFR, Accountability, Challenges, Opportunities

First Plenary Session / 185

Digital Technology and the Imperative of Arabic Language in the Training of History Students in Contemporary Nigerian Universities

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Abstract

The curriculum design of many Nigerian Universities was tailored along the Eurocentric perspectives in which the bulk of archival materials sourced in the reconstruction of African history were from colonial memoirs, correspondences, and records. Little attention was devoted to the acquisition of the understanding of the reading and writing skills of the Arabic language. Against this background, this paper examines the state of Arabic knowledge in the training of history students in contemporary Nigerian universities. The paper relies on analysis of both primary and secondary sources of history such as oral testimonies and archival documents. Existing relevant articles in learned local and international journals as well as chapters in authored and edited books are also utilised. Unpublished materials such as theses, long essays, and dissertations, as well as private manuscripts are also used. The paper argues that the absence of Arabic language in the training of history students in many Nigerian universities has negatively affected originality in students'research outputs. It also posits that mainstreaming of the study of Arabic language is critical in the same way that French Language has been made compulsory for students of History in most Nigerian universities. This is because Arabic language is as important as the French language for history students in Nigerian universities because of the bulk of historical documents about Nigerian history in Arabic language and the fact that Arabic is one of the most widely spoken languages in contemporary Africa. This equally examines the significance of the Arabic Language in historical scholarship in departments of History in Nigerian Universities in the light of digital technology. It will determine the suitability of AI in the science of historical scholarship and its desire to sustain research originality, regional focus and professional relevance of Nigerian historians of the 21st century.

Keywords: Digital Technology, Arabic Language, Historiography, Ancillary Disciplines, Elective Courses.

First Plenary Session / 148

Road Transport Insecurity as Constraint to Agricultural Food Produce Marketing in Ilorin, Nigeria

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Abstract

Efficient and reliable transportation is essential for facilitating production, distribution and marketing of agricultural and other products. However, insecurity in many parts of Nigeria is resulting in

the disruption of road transportation thus, restricting the movement of people and making the distribution and marketing of farm produce difficult. The study examined the effects of transport insecurity on the marketing of agricultural food produce in Ilorin, Nigeria. Agricultural produce traders (n = 125) were sampled from the six major produce markets in Ilorin metropolis using simple random sampling technique. Data were collected through questionnaire administration and analysed using frequency counts, percentages and ranking. The results show that most of the agricultural products sold by the traders are sourced from locations experiencing security challenges. Armed robbery was the major (64%) road transport security problem faced by the traders. Insecurity on the roads had various effects including creation of fear for travel among the traders (85.6%) and reduction in quantity of produce available (79.2%). However, ranking of the effects showed that high cost of transport, higher selling prices and high cost at source markets were ranked 1st, 2nd and 3rd respectively. The major coping strategies adopted by the traders included avoiding night travel (31.2%) and changing to safer locations to buy produce (22.4%). It is recommended that government should improve security on Nigerian roads and develop other modes of transport to reduce overdependence on road transportation.

First Plenary Session / **180**

Open, Distance, and E-Learning (Odel) in a University System in Nigeria

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Abstract

Open, Distance, and E-Learning (ODEL) programs have become a vital part of modern educational institutions, providing flexibility and accessibility to students all over the world. This article investigates the landscape of ODEL in Nigerian universities, identifying its strengths, weaknesses, opportunities, and Threat. The introduction provides a historical backdrop for distant learning in Nigeria, outlining its progression from early external examinations to current regulatory concerns. It emphasizes the role of great teaching, research, and community development in determining university success. The paper examines the general notion of learning, highlighting its lifetime and multifaceted nature, with a focus on ODEL's growth and popularity as a result of technology advancements. The following sections examine distance learning and e-learning, including its definitions, methodology, and usefulness within the university system. Key issues include adaptability, scalability, and the role of technology in supporting learning. The report cites several barriers to ODEL implementation, including varied policy frameworks, infrastructure issues, and low internet penetration. Threats such as technological overdependence and regulatory compliance difficulties are also addressed. Despite these challenges, the article identifies various opportunities provided by ODEL, such as increased access, cost reductions, and international collaboration. The author give recommendations for overcoming deficiencies and capitalizing on possibilities, highlighting the importance of strong policy frameworks, infrastructure investment, and capacity building. In conclusion, the article emphasizes ODEL's revolutionary potential in Nigerian institutions while advocating for proactive efforts to overcome hurdles and reap its benefits.

First Plenary Session / **221**

Investigation of Water-Cooling System in Pv Panel to Enhance its Electrical Performance Technology Adoption in Agricultural Extension.

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ABSTRACT

This paper introduces an examination of the Water-Cooling System in Photovoltaic Panels aimed at enhancing electrical *68 and fostering the adoption of technology in agricultural extension. The cooling system was designed and implemented to ensure a continuous flow of cool water across the PV panel's surface, reducing its operational temperature and consequently improving its electrical efficiency. The PV panel underwent testing in various environmental conditions, both with and without the cooling system. The research findings indicate that the PV panel's temperature without a water-cooling system was higher compared to the one with water cooling. It is recommended to explore the feasibility of integrating water-cooling with self-cleaning mechanisms, such as hydrophobic coatings or robotic cleaning systems

Keywords: Water-cooling system, photovoltaic Panel, Electrical performance, Temperature,

First Plenary Session / 120

Awareness and Accessibility of Digital Health Technologies on Undergraduate Mental Health Care in University of Ilorin, Kwara State

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Abstract

This qualitative study explores the awareness and accessibility of digital health technologies for undergraduate mental health care at the University of Ilorin, Kwara State. Ten respondents, comprising undergraduate students, were interviewed using semi-structured interviews to gather insights into their awareness of digital health tools and their experiences with accessing mental health support services. The study revealed varying levels of awareness among students regarding digital health technologies for mental health care, with some expressing familiarity with online resources and mobile applications while others were unaware of available options. Accessibility challenges, including limited internet access, stigma associated with seeking mental health support, and lack of awareness about available services, were identified as barriers to utilizing digital health technologies. Despite these challenges, participants recognized the potential benefits of digital health tools in improving access to mental health care and expressed interest in utilizing such resources if made more accessible and widely promoted. The findings underscore the importance of raising awareness about digital health technologies and addressing barriers to access to enhance mental health support services for undergraduate students.

Keywords: Digital health technologies, mental health care, awareness, accessibility.

First Plenary Session / 88

Realities of Ruminant Animal Production in KU8 Group: An Indirect Approach to Resolving Multifaceted Farmer-herder Challenges in Nigeria.

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Abstract

This paper investigates the status of ruminant animal production in KU8 Universities as an avenue to providing solution to food security challenges in Nigeria. The Universities that float Agricultural programmes in the KU8 group were understudied in the period of 2021 –2023. Data obtained were subjected to descriptive statistics. The result obtained revealed that (i) 100% of the focused universities rear ruminant animals in compliance with the NUC regulation for Agricultural programmes; (ii) 0% of the focused universities own improved breeds; (iii) all the focused universities practice complete reliance on natural pasture and forbes; (iv) 75% of of the investigated universities are prone to farmers-herdsmen conflict and its consequential food security challenges. The study reveals (i) that all the focused universities have the potentials to provide models that could resolve farmers-herdsmen conflict and its consequential food security challenges in Nigeria; (ii) the focused Universities lack the infrastructure to fulfill the objectives in Ruminant animal production and relevant community service. It is recommended that ruminant animal production in these universities be made scientifically fascinating through engagement of prototypes capable of unsolicited emulation, eliminating farmers-herdsmen conflicts and ensuring profit making.

First Plenary Session / 351

RETHINKING JOURNALISM CURRICULUM FOR SUSTAINABLE DEVELOPMENT IN NIGERIA: MULTICULTURAL REPORTING AS A GAME CHANGER

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Abstract

Every academic discipline has its respective curriculum meant to be taught to students in a given course as an interactive system of instruction with specific objectives, contents, measurements and resources in order to help students meet the standards expected of them. However, the benefits of the training so given to students goes beyond the academic environment to the larger society in the context of raising future leaders that would unify a community or nation as the case may be in a socially responsible manner. In this wise, one of the academic fields that holds the banner for achieving this pristine goal is Journalism whose pivotal role in either unifying or breaking the chord that wedge any modern and diverse society together is well known. The popular dictum in journalism lexion,'The pen is mightier than the sword'easily comes to mind as it accurately captures the enormous power that the pen pushing profession possesses. While the curriculum being used in Journalism schools in Nigeria may have served useful purposes in the past in terms of awareness creation, enlightenment, education, entertainment and; transmission of cultural heritage from ne generation to another, a gaping gap still remains to be filled and that is the absence of multicultural reporting. The absence of this sensitive subject in the curriculum of journalism schools in a diverse

country such as Nigeria seems to be partly responsible for the existence of narrow minded and chauvinistic journalists that serves vested interests rather than National interest .No wonder the much -sought national unity and sustainable development has remained a pipe dream. This paper in the light of the foregoing seeks to argue the need for the introduction of multicultural journalism in Nigeria's academic institutions where the course is being offered as it stands to be a game changer in the quest for nationhood ,love; and unity in diversity, all of which are required before any sustainable development can take place. The social responsibility theory and the development theory underpins this study while qualitative method is adopted to drive home the urgent need for multicultural reporting in Nigeria's journalism education curriculum which this paper believes would serve the larger interest of Nigerians than what currently obtains.
KEY WORDS: Re-thinking, Journalism, Curriculum, Sustainable development, Multi-Cultural Reporting, Game-Changer

First Plenary Session / **51**

Religious Conflict among Major Groups and Panacea: A Case Study of Iwo and Ikoyi in Osun State NIgeria

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Abstract

Religious has its root in humanity which has the key to all human endeavor and activities including diverse culture, religious beliefs and traditions. There is need for open communication and constructive talk. Traditions has ever been greatly, define as beacon of hope fostering understanding, tolerance and unity among the different religions. However, inter religious dialogue and understanding is an interface between two or more religious bodies, to attain a peaceful, tolerance and united communities and by extension the world at large. This paper investigating the conflict issues amongst the Christian, Muslim and traditional worshipers, the common grounds to achieving understanding amongst trio, how effective or otherwise of the mechanism to achieve utmost peace. Therefore this paper made use of secondary source for data collection. Newspaper journals, stakeholders, interview archived document, published materials. It was discovered that key stakeholder Government, Oba's and Baales, Priests, Isese (traditional worshipper) needed to be sought after and impressed upon them of the need to find a suitable ground that is similarity in those religious denominations to ease understanding. Also government should make the religious group have sense of belonging and incisiveness in their policies in dealing with them. Iwo is an indigenous town of corresponding number of Christian, Muslim and traditional worshipers, while Ikoyi an ancient traditional Yoruba town is growing with numerous Muslim and Christian in the recent times. This paper is important to discover a home-grown solutions to the lingering issues of religious conflict among the community of Iwo and Isokan Local Government Area of Osun State to the barest minimum.

First Plenary Session / **332**

Research Collaborations in Islamic Sciences: Prospects and Challenges

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Abstract:

The evolvement of issues and ideas in the contemporary society make the world a complex terrain not only for living, working and learning but also for worshiping. Thus, research collaboration across fields of knowledge becomes indispensable for the department of both individual and the society. Thereby, research in Islamic studies is expected to be universal and not limited to any aspect of human life because the Qur'ān which is its primary source is all-encompassing. This is why Islamic studies embraces other disciplines within itself as the directives and injunctions of Allah and His Messenger are needed on the discoveries for guidance. Hence, there is a need for research collaboration for sustainable future. This paper, therefore, aims at studying the possibility of conducting collaborative researches between Islamic Studies and other fields of learning; Arts, Agriculture, Humanities, Law, Social Sciences, Management Sciences, Modern Sciences and Education. So, through the phenomenological and content analytical methods of research, this paper examines the prospects and challenges of research collaboration in Islamic studies. It is discovered that researches in Islamic Studies, in most cases, are library-based which could neither withstand the challenges in the contemporary society nor contribute to solving societal problems. With a view to making Islamic studies relevant and contemporaneous, the paper suggested cross fertilization of ideas in form of research collaboration which will go a long way in establishing and affirming its professionalism and universality.

Keywords: Islamic Studies, Research, Prospect, Challenges, Sustainability.

First Plenary Session / **57**

Comparative Study of Machine Learning Procedures for Prediction of Diabetes

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Abstract

Discriminant analysis is one of the powerful statistical learning techniques used to analyze data in which the response variable is dichotomous while other features are quantitative. However, its usage in prediction or classification problems is extremely low when compared with some of the most widely used techniques such as Logistic Regression (LR), Support Vector Machine (SVM), and Random Forest (RF) among others. Hence, this study focuses on comparing the performances of Quadratic Discriminant Analysis (QDA), Linear Discriminant Analysis (LDA), Logistic Regression (LR), and Random Forest (RF). Pima Indian Diabetes dataset was used for the study and the performances of the aforementioned techniques were measured by the score of accuracy, sensitivity, specificity, positive predicted value, negative predicted value, prevalence, detection prevalence balanced accuracy, confusion matrix, and receiver operating characteristic (ROC) curve. The study revealed that QDA outperformed the LDA, LR and RF with about 80.8% and 77% accuracy and balanced accuracy scores, respectively, if the less important variables pressure and triceps are removed.

Keywords;

First Plenary Session / **25**

Interfaith Dialogue: Bridging the Gap for Sustainable Development in Nigeria

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Abstract

The cooperative, positive interaction and understanding between people of different faiths or spiritual beliefs is one among the key essence of human existence. Thus, no meaningful relationship and development exist where there is rancor, disharmony and intolerance between the adherents of faiths in any given society. It is against this background that this paper examined the interfaith dialogue and understanding as instruments towards achieving a sustainable future. The researcher used secondary source of data from internet, textbooks, journals and other relevant manuscripts to do justice to this paper. The findings of the study revealed that interfaith dialogue is one of the major means of promoting peace, understanding and tolerance between different faiths. The study further revealed that to achieve a sustainable development, interfaith dialogue must be strengthened, exercised and institutionalized in a society. The study concluded that interfaith dialogue should not be factionalized, personalized and regionalized to enhance a peaceful coexistence irrespective of faith. The study suggested that interfaith dialogue should be a community based institutions such that traditional rulers, clergy men, individuals, government and various Non-Governmental Organisations are involved to enhance sustainable development driven society.

Key words:

First Plenary Session / **112**

Performance of Random Forest and Gradient Boosting in Anomaly Detection of Semiconductor Materials.

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Abstract
Machine Learning is a branch of computer science that teaches machines to learn from data with less assistance from humans. The machine learning techniques, "Random Forest"and "Gradient Boosting"were used in this study. The aim of the study was to examine the performance of Random Forest and Gradient Boosting in anomaly detection of semi-conductor materials on the same data-set with various measuring factors. The Receiver Operating Characteristic (ROC) Curve and Area under the Curve (AUC) for the two techniques were recorded as 88.32 and 87.55 respectively with Gradient Boosting having an accuracy of 92.42 as the optimal model. Using a few criteria to separate the data into anomalous and normal points, 91.7% was identified as normal with 8.3% identified as abnormal.
Keywords: Machine Learning, Anomaly Detection, Gradient Boosting, Random Forest, Semiconductors

First Plenary Session / 95

Knowledge of the Cause, Effect and Prevention of Stillbirth among Residents in Ilorin South Local Government Area, Kwara State

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Abstract

Stillbirth is the death or loss of a baby before or during delivery. Both miscarriage and stillbirth describe pregnancy loss, but they differ because a baby death can only be considered stillbirth after 20 weeks of gestation. Most stillbirth happens before a pregnant woman goes into labour. However a small number happens during labour and birth Therefore, the study examine the knowledge of the cause, effect and prevention of stillbirth among residents in Ilorin South Local Government Area, Kwara State. The objectives of the study were to examine if residents have knowledge of (i) cultural practices as a cause (ii) stigmatisation as an effect and, (iii) antenatal visit as prevention of stillbirth among residents in Ilorin South Local Government Area, Kwara State. A descriptive research of the survey type was adopted for the study. The target population comprised all residents in Ilorin South Local Government Area, Kwara State. A multi-stage sampling procedure was adopted for the study. A researcher-structured questionnaire validated by three experts was used as the instrument. The reliability of the instrument was established through split-half method and a co-efficient of 0.87r was obtained using Spearman Brown Statistics. Inferential statistics of Chi-square was used to test the data collected @ 0.05 level of significance. The finding of the study revealed that: residents had significant knowledge of STD, astigmatization as an effect of stillbirth and residents had significant knowledge of antenatal visit as a prevention of stillbirth. Based on the findings the study concluded that sexually transmitted disease, stigmatisation and antenatal visit are the cause, effect and prevention of stillbirth among residents in Ilorin South LGA respectively. It was therefore, recommended that sensitization on the causes, effects and prevention health workers should be emphasized among residents in Ilorin-south LGA.

Keywords: Cause, Effects, Prevention, Stillbirth and Resident

First Plenary Session / 126

Prevelence of Urinary Tract Infections among Female Students in Al-Hikmah University Ilorin, Nigeria

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Abstract

Urinary tract infection (UTI) is a common infection associated with mostly (95%) bacterial infection in the genitourinary tract. This study was aimed at determining the prevalence of urinary tract infections among female students in Al-Hikmah University, Ilorin, Kwara State between February and April, 2023. A total of 230 female students in Al-Hikmah University between the ages 15-34 were selected randomly from old hostel, international hostel and off campus in Al-Hikmah University Ilorin. Clean catch mid-stream urine specimen was collected from each participant and cultured. Antibiotic susceptibility testing was carried out. Statistical analysis was carried out using SPSS 25 and p-value was set at p <0.05. Out of the 230 female Al-Hikmah students, 35 (15.2%) were symptomatic for UTI, while 195 (84.8%) were asymptomatic. Significant bacteria were isolated in 64 (27.8%) female students in which 29 (45.3 %) were from the students living in general hostel, 15 (23.4 %) from international hostel and 20 (31.3%) from off campus students. The common bacterial isolates were Staphylococcus aureus 22/64 (34.4%), followed by coagulase negative staphylococcus sp 15/64 (23.5%), Klebsiella pneumoniae 14/64 (21.9%), Escherichia coli 11/64 (17.1%) and Enterococcus sp 2/64 (3.1%). Gram-negative isolates showed high resistance rate of 52% to chloramphenicol, 44% to amoxicillin-clavulanic acid and 32% to gentamycin while Gram-positive isolates showed high resistance rate of 48.7% to amoxicillin-clavulanic acid and 35.8% to ceftriaxone. The Gram-negative isolates showed high susceptibility rate of 92% to nitrofurantoin while the Gram-positive isolates showed high susceptibility rate of 97.4%. The overall prevalence of 27.8% of UTI among female students was significant, indicating a health problem in the institution which may be associated with poor hygiene practices. It is necessary to create awareness about health education and personal hygiene in the institution to minimize the incidence of infections among the students.

First Plenary Session / **108**

Resilence and Coping Strategies of Selected Msmes During Hard Times: Evidence from Kwara State

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Abstract

Hard times are often inflicted on enterprises by poor economy and infrastructures, natural disaster, government policies and actions of regulatory agencies etc. Sometimes hard times adversely affect the operational efficiency, effectiveness and indeed existence of the enterprises. This study examined the level of resilience and coping strategies of MSMEs in Kwara State. Structured questionnaire and follow-up interview were used to elicit information from respondents. Analytical techniques used in this study include, factor analysis to identify and rank coping strategies, while Mann-Whitney-U-test was used to test the hypotheses proposed. The study revealed that enterprises in Kwara State generally have low resilience mostly because of poor public facilities and support. Cost-cutting strategies followed by debts/credit purchases were ranked as the most potent coping strategies especially in the short-run. It was also observed that generally there were no statistically difference in the resilience and coping strategies among enterprises, in different economic sectors, rural or urban locations as well as different categories of MSMEs. Hence, the study recommends upgrading of public facilities such as electricity, water and transportation. It also recommends that further studies should include enterprises in the other five geo-political zones of the country for better insight on the issue.

First Plenary Session / **204**

Customer Segmentation Using K-Means Clustering: A Systematic Review

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Abstract:

In today's competitive environment, understanding customers is crucial for maximizing profitability, especially the most profitable ones and those with potential. By grouping customers based on their behaviour, businesses can better target customer actions and behaviours like launching custom products, using personalized marketing, and meeting customer expectations. The goal of customer segmentation is to develop relationships with the most profitable customers through the development of tailored marketing strategies. This study reviews the strategic implementation of k-means clustering, a powerful machine learning algorithm, to redefine and enhance the precision of customer categorization, which involves segmenting customers into different groups based on distinct preferences, behaviours, and segmentation factors, aiming to foster tailored relationships with the most profitable customer segments

First Plenary Session / **357**

LEVERAGING VIDEO SIMULATION BASED LEARNING FOR CREATIVE INNOVATION: A CALL TO ACTION FOR UNIVERSITY-INDUSTRY PARTNERSHIP

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Abstract
The world is facing an unprecedented array of complex problems, from climate change and sustainable development to social inequality, unemployment, and global health crises. Addressing these challenges require innovative thinking, creative problem-solving, and effective collaboration. However, traditional learning approaches often struggle to equip individuals with the skills and mindset necessary to tackle these real-world problems. Video simulation-based learning has emerged as a promising solution, offering immersive and interactive experiences that can enhance creative innovation and problem-solving capabilities. Yet, there is a significant gap in understanding how to effectively leverage video simulation-based learning in university-industry partnerships to drive creative innovation and address pressing global challenges. This paper suggest that, Universities and industries can collaborate on video simulation learning projects that foster innovation, entrepreneurship, and startup incubation. Universities can integrate video simulation learning into their curriculum, providing students with experiential learning opportunities that mirror industry scenarios. Universities and industries can partner to develop video simulation learning programs that identify and develop talent, creating a pipeline of industry-ready graduates among others.
Keywords: Video simulation based learning, University, Industry, Technology, Partnership.

First Plenary Session / **208**

Applications of Limacon-shaped domain on some subclass of Analytic function

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Abstract
In this study, we tackle the Fekete-Szego problem related to functions in the class $\beta\tau\sigma(s)$ defined on a Limacon domain, drawing inspiration from the work of Mustafa and Murugusundaramoorthy. We provide answers to this problem and give exact limits on the coefficients. In addition, we calculate the maximum estimate for the second Hankel determinant
Keywords: Limacon-shaped domain, bi-univalent functions, hankel determinant, bounded turning functions, Fekete-Szego inequality

First Plenary Session / **366**

An Empirical Evidence on the Perception of Stakeholders on Industry-University Partnership of Graduates of Business Education in Kwara State, Nigeria

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Abstract
The perception of stakeholders on an industry-university partnership of graduates of business education deserves to be considered. The reason why it deserves attention is that it serves as a determinant for contributing to the economic development of both universities and industries. Hence, the study on the perception of stakeholders on industrial-university partnership for graduates of business education was carried out to know how industries and universities partner together in order for business education graduates to have the proper knowledge and skills about business. The descriptive survey research design was found appropriate for a study of this nature. The study population consists of all three universities out of the six universities that offer business education as a course in Kwara state. Random sampling was utilized to pick up the 84 participants for the study, while a researcher-designed questionnaire tagged "PSIUPQ" was developed and used for data collection. Three research questions guided the study and were analyzed through frequency counts and percentages. The two hypotheses formulated were tested with a t-test at a 0.05 level of significance. The findings of the study revealed that the mean responses of the industrialists and the business education graduates in terms of industrial–university partnership have no significant difference since the t-cal (2.586) and the p-value of .00 is less than the considerable value of 0.05. Furthermore, the responses of graduates and industrialists on the strategies for improving partnerships in university graduates and industries promoting employability for business education programs do not have a significant difference since the t-cal (3.146) and the p-value of .000 is less than the considerable value of 0.05. It was recommended, based on findings emanating from the study, that industries and training institutions should provide a workforce that can meet the aspirations and expectations of industries and other sectors of the economy. Also, industries and universities should help improve the quality and relevance of practical skills in business education. Stakeholders should help industries and universities partner well in the area of communication for the effectiveness of business education programs.

Keywords: Perception, Stakeholders, Industry-University, Partnership, Graduates, Business Education

First Plenary Session / **122**

A Review of The Phytotherapeutic Effect of Lemon(Citrus Limon) in Cancer Management

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Abstract

Cancer remains a significant global health concern, driving the exploration of alternative and complementary therapies to conventional treatments. Lemon (Citrus Limon), a citrus fruit abundant in bioactive compounds, has garnered attention for its potential therapeutic effects in cancer management. This review aims to comprehensively evaluate the phytotherapeutic properties of lemon in cancer management. Key molecular mechanisms underlying lemon's anticancer activity, including its rich content of flavonoids, limonoids, and vitamin C, are explored. Preclinical and clinical studies assessing lemon's efficacy against various cancer types are summarized, highlighting its potential as a promising adjunctive or alternative therapy. Moreover, synergistic effects between lemon and conventional cancer treatments are discussed, along with safety consideration and limitations. However, synthesizing existing evidence, this review provides insights into lemon's role in cancer management. Understanding its mechanisms of action and evidence-based efficacy can guide future research and inform clinical practice, offering new avenues for the development of complementary cancer therapies.

First Plenary Session / **212**

Development of an Ai-Powered System for Laboratory Identification of Selected Enteric Bacteria

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Abstract:

Microorganisms commonly referred to as microbes, are living organisms that have a size too small to be seen by the naked human eye, but may be observed with the assistance of a microscope. This study presents the development of an AI-powered system for the laboratory identification of selected enteric bacteria. Leveraging machine learning algorithms and comprehensive datasets containing morphological and biochemical features, the system aims to enhance the accuracy and efficiency of bacterial identification. These includes gathering relevant data and literature on bacterial laboratory identification methods, compiling a comprehensive database of bacterial characteristics, developing machine learning models for identification, and pattern analysis techniques. The dataset encompasses of selected enteric bacteria: Pseudomonas species, Vibrio species, Escherichia species, Citrobacter species, Staphylococcus species, Salmonella species, Shigella species, Campylobacter species, Clostridium species, Enterococcus species. Results demonstrate the meticulous compilation of data and features essential for accurate identification. The study underscores the potential of AI-driven approaches to revolutionize bacterial identification, with implications for public health, research, and clinical practice

Keywords: Artificial Intelligence, Microbial Identification, Enteric bacteria, Machine Learning.

First Plenary Session / 192

Artificial intelligent and its Role in Promoting Creative and Sustainable Science Education: An Exploratory Study

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Abstract

This study investigates the potential of Artificial Intelligence (AI) to enhance creative and sustainable approaches in science education. As technological advancements continue to reshape educational system, there is a growing interest in leveraging AI to address challenges facing educational system and foster innovative learning environments. This study aims to examine how AI can be integrated into science education to promote creativity and sustainability, thereby enriching students' learning experiences and preparing them for the demands of a rapidly evolving world. This study employs qualitative research approach through a comprehensive review of extant literature, it will explore existing theoretical frameworks and empirical evidence surrounding AI integration in education, with a particular focus on its applications within the realm of science education. By examining real-world case studies and practical implementations of AI technologies in science classrooms, this research seeks to identify best practices, challenges, and opportunities associated with AI-enhanced science education. The findings of this study will contribute to the ongoing discourse on the role of AI in education, shedding light on its transformative potential to cultivate creativity, critical thinking, and sustainability literacy among students. It will shed light on the synergies between AI and science education, by offering valuable insights for educators, policymakers, and technology developers seeking to harness AI as a catalyst for fostering innovative and sustainable learning ecosystems. The study will underscore the importance of fostering interdisciplinary collaborations and ethical considerations to maximize the benefits of AI in promoting holistic and future-ready science education.

Keywords: Artificial Intelligence, Creativity in Education, Sustainable Science Education, Technological Advancements, Innovative Learning

First Plenary Session / 164

A New Poisson-Exponential-Gamma Distribution for Modelling Count Data with Applications

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ABSTRACT
In this paper, a new member of the Poisson family of distributions called the Poisson-Exponential-Gamma (PEG) distribution for modelling count data is proposed by compounding the Poisson with Exponential-Gamma distribution. The first four moments about the origin and the mean of the new PEG distribution were obtained. The expressions for its coefficient of variation, skewness, kurtosis, and index of dispersion were equally derived. The parameters of the PEG distribution were

estimated using the Maximum Likelihood Method. Its relative performance based on the Goodness-of-Fit (GoF) criteria was compared with those provided by seven of the existing related distributions (Poisson, Negative-Binomial, Poisson-Exponential, Poisson-Lindley, Poisson-Shanker, Poisson-Shukla, and Poisson Entropy-Based Weighted Exponential distributions) in the literature on three different published real-life count data sets. The GoF assessment of all these distributions was performed based on the values of their loglikelihoods (–2logLik), Akaike Information Criteria, Akaike Information Criteria Corrected, and Bayesian Information Criteria. The results showed that the new PEG distribution was relatively more efficient for modelling (over-dispersed) count data than any of the seven existing distributions considered. The new PEG distribution is therefore recommended as a credible alternative for modelling count data whenever relative gain in the model's efficiency is desired.
Keywords: Poisson-Exponential-Gamma, Exponential-Gamma, Poisson-Lindley, Negative Binomial, Poisson Distribution, Goodness-of-fit.

First Plenary Session / **45**

Fructose-induced cardiac lipid accumulation in rats is aggravated by pregnancy: protective role of sodium acetate.

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Abstract

High fructose consumption has been associated with cardiac hypertrophy and the underlying mechanism poorly understood. The role of acetate, a short chain fatty acid (SCFA) on fructose induced cardiac lipid accumulation in pregnancy is not proven. We hypothesized that acetate protects against fructose induced cardiac lipid accumulation through improved adenosine deaminase (ADA)/xanthine oxidase (XO)/ uric acid (UA) production and glutathione dependent antioxidants index (GSH/GSSH), and that pregnancy aggravates the fructose effects.

Thirty-six female Wistar rats were divided into six groups (3 pregnant (P) and 3 non-pregnant (NP), n=6/group). Both the pregnant and non-pregnant rats had control groups (NP and P) drinking water, 10% fructose (w/v) (NP+F or P+F,) and 10% (w/v) fructose plus sodium acetate (NP+F+A or P+F+A, 200 mg/kg) and distil water (vehicle for acetate, p.o). After 3 weeks, animals were anesthetized by ketamine (90mg/kg) and xylazine (10mg/kg).

High fructose resulted in increased plasma and cardiac triglycerides (TG), free fatty acids (FFA) and total cholesterol (TC). Also, there was an increased in cardiac ADA, UA, XO in both P and NP rats. However, the high fructose consumption led to decreased cardiac adenosine, GSH/GSSH glutathione peroxide (GPx), and glucose-6-phosphate dehydrogenase concentration, (G6PDH). Acetate reverses the alteration induced by fructose.

The results demonstrated that fructose induces cardiac lipid accumulation through defective G6PD-dependent antioxidant barrier, ADA, and UA production. The result also showed pregnancy induced lipid accumulation. Interestingly acetate ameliorate lipid accumulation in the heart of both P and NP group through the enhanced antioxidants pathway, suppressed ADA and uric level.

Key words:

First Plenary Session / **58**

Dermocosmeceutics and Nutricosmeceutics from Underutilized Tropical Seeds: Green Synthesis for Sustainable Biodiversity

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Globally, the application of safe cosmetic products is inevitable since many individuals aspire to maintain beautiful skin and hair. An innovative green synthetic route was adopted for the direct characterization of some conventional and non-conventional tropical seeds which include Sebal causarium, Cola gigantea, Blighia sapida, Cordia sebestena, Daniellia oliveri, Elaeis guineensis, Citrus aurantifolia, Citrus paradise, Vitellaria paradoxa, Citrullus vulgaris, Mormodica charantea, Delonix regia, Moringa oleifera, Kigelia africana and Prosopis africana. The lipid, fatty acid methyl and butyl/isobutyl esters obtained via multistep and direct methyl/butylation were characterized using Fourier Transform Infrared Spectroscopy and Gas Chromatography-Mass Spectrometry. The principle of green chemistry was further adopted for the preparation of natural antiseptic soaps which were fully plant-based, biodegradable and free of all artificial antibiotics, colourings, fragrance and preservatives. Ocimum basilicum served as source of fragrance as well as antiseptic agent. Physicochemical parameters which include colour, acid value, free fatty acid values, percentage yield, non-fatty matter, saponification values, hardness, pH, colour and foaming ability of the oils and saponified products were determined as applicable. The In vitro antimicrobial, antioxidant, anti-inflammatory and membrane stabilisation activities of the oils and cosmetic products were determined using standard procedures. Daniellia oliveri oil contains 57% linolelaidic acid as the major fatty acid, while oleic acid (46%) and lauric acid (44%) were the most prominent in Vitellaria paradoxa and Elaeis guineensis respectively. Linoeladic acid was the most predominant in Citrullus vulgaris, Delonix regia and Prosopis africana. Oils and allied products of Daniellia oliveri, Delonix regia and Vitellaria paradoxa significantly inhibited the growth Streptococcus aureus, Klebsiella granulomatis and Aspergillus niger while others exhibited significant antioxidant or anti-inflammatory activities. The natural (green) cosmetics, free of all synthetic additives were potent, and cost effective compared to commercial products.

Keywords:

First Plenary Session / 409

Strength and Durability Assessment of Metallic Fibre-Reinforced Interlocking Blocks

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Fibre inclusion in concrete mix significantly improves its bending, fatigue, abrasion strength and toughness properties. This study presents the strength and durability assessment of interlocking blocks reinforced with metallic fibre. Nine specimen ratios containing different percentages of metallic fibre were used to produce interlocking blocks, and physical and mechanical tests were conducted for different curing ages ranging from 7 days to 56 days. The durability test in terms of water absorption showed an increase with an increase in fibre content (except specimens E and F), this could be due to additional pore spaces created by the presence of metallic fibre in the matrix. Specimen H recorded the highest water absorption value of 2.3% and 3.1% at 2 hrs and 12 hrs respectively. The compressive strength result for the specimen ranges from 9.34 - 14.01 N/mm2 and specimen D had the highest compressive result at 56 days. The results showed that adding metallic fibre to the interlocking blocks reduces the block compressive strength after 56 days except for Specimen D with an 11% increase (14.01 ± 0.46 KN/m2). There was an obvious improvement in the flexural strength of metallic fibre-reinforced interlocking blocks. The flexural strength was conducted according to IS 15658:2006 and the results range from 7.36 –11.2 N/mm2. The fibre-reinforced interlocks are recommended for residential pathways or pedestrian paths.
Keywords: Metallic Fibre; Interlock; Building Construction; Strength; Civil Engineering.

First Plenary Session / **55**

Assessment of Health Workers' Awareness and Understanding of the Nigeria National Climate Change Policy in Kaduna Metropolis

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Abstract

Climate change poses a significant threat to human health and well-being, and in recognition of this, the Nigerian government developed the National Climate Change Policy (NCCP) to address its impacts. It is essential that health workers are well-informed about the NCCP to encourage active contributions in educating and protecting the public against the adverse effects of climate change on their health. This study therefore assessed health workers' awareness and understanding of the NCCP in secondary public hospitals in Kaduna metropolis. Two research questions were formulated to guide this study. Using the Leslie Kish formula, a sample size of 160 was calculated, which was then increased to 179 to increase the precision of the study. A standard questionnaire was used as the major instrument for data collection from 185 health workers working in government-owned secondary care facilities in Kaduna metropolis. A sample size of 179 respondents were selected using multistage sampling. The data collected from the respondents was summarized descriptively and inferentially for the various categories included in this study. The majority of health workers were found to have good understanding of the basic concepts of the NCCP in Nigeria. A statistically significant relationship ($p = 0.009$) was found between awareness of NCCP and age of respondents. The study concluded stressing the need to develop an action guide for health workers to provide a clear description of their roles as it relates to the practice of the NCCP in Nigeria.

Keywords:

First Plenary Session / **388**

Religious Understanding, Not Tolerance: A Paradigm-Shift in Muslim-Christian Coexistence in Nigeria

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Abstract

Humanity today lives in a global village, and this makes it inevitable and certainly impossible to have in a society people of diverse ethno-religious inclinations co-existing together either as indigenous citizenry of the society or as migrants without understanding each other's feelings. Nigeria is a typical example of a multi-ethnic and multi-faith society, with adherents of Islam and Christianity as dominant. For decades now, especially in the northern parts of the country, there have been an unhealthy, frosty, and disdainful relationship between Muslims and Christians. Today, the spate of incessant killings of innocent lives and wanton destruction of valuables all in the name of religion is alarming and deleterious to our national security and corporate existence. It is against this backdrop that this paper delineates the glitches hindering the attainment of peaceful coexistence among Muslims and Christians in Nigeria. The paper posits that religious understanding, not tolerance is the perfect recipe for peaceful relationship among adherents of these two faiths. This is because, understanding connotes knowing the rights of others, respecting and accepting same without contempt or disdain. Tolerance on the other hand, presupposes dealing with something unwanted because there is little or nothing one can do to change it at the moment. The paper concludes that tolerance is ad hoc and temporary in nature, while understanding is more enduring. Hence, the time has come for a paradigm shift from tolerance to religious understanding as a lasting solution to religious violence in Nigeria.

Keywords: Understanding, Tolerance, Paradigm-shift, Coexistence, Nigeria

First Plenary Session / 175

Thermodynamic Optimization of Magnetohydrodynamic(MHD) Jeffrey Fluid Flow with Variable Viscosity and Nonlinear Thermal Radiation over a Stretching Sheet

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Abstract

This study delves into the thermodynamic efficiency of magnetohydrodynamic (MHD) Jeffrey fluid flow over a stretching sheet with variable viscosity and radiation. The second law of thermodynamics is applied to investigate entropy generation and optimize the flow process. The analysis reveals the significant impact of variable viscosity and radiation on entropy generation, highlighting the importance of considering these factors in the design and optimization of industrial processes. The findings provide valuable insights for improving the efficiency and sustainability of various engineering applications, including materials processing and thermal management systems. The results show that variable viscosity and radiation can significantly affect the entropy generation rate, and

optimizing these parameters can lead to improved thermodynamic performance. This research contributes to the development of more efficient and sustainable engineering systems, and its findings can be applied to a wide range of industrial processes.

Keywords: Entropy generation, nonlinear thermal radiation, Jeffrey fluid, non-uniform heat source/sink, numerical technique.

First Plenary Session / **143**

Exploring Staff Perceptions Of The Need For Ai-Driven Student Support Services At Al-Hikmah University: A Qualitative Study

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Abstract
This qualitative study investigates the perceptions of staff members regarding the necessity and potential benefits of implementing AI-driven student support services at Al-Hikmah University. With the increasing integration of technology in education, there is a growing interest in leveraging artificial intelligence (AI) to enhance student support services and improve academic outcomes. Through semi-structured interviews with a diverse group of staff members, including administrators, faculty, and support staff, this research explores their perspectives on the current challenges faced by students, the potential role of AI in addressing these challenges, and the anticipated impact on student success and institutional effectiveness. Thematic analysis of the interview data reveals key themes related to the perceived benefits of AI-driven student support services, concerns about implementation challenges and ethical considerations, and recommendations for effective integration into the university environment. The findings offer valuable insights for educational policymakers, administrators, and practitioners seeking to leverage AI technology to enhance student support services and promote academic success in higher education settings.
Keywords: Staff Perception, Need for AI-Driven, Student Support Services, University

First Plenary Session / **432**

Exploring the Role Of Education in Promoting Cultural Diversity and Community Development Among Students in Kwara State

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This study aims to explore the impact of education in promoting cross-cultural understanding and community development among students from diverse ethnic backgrounds in Kwara State. The study is qualitative in which three major ethnic groups in the Kwara state notably; Nupe, Yoruba and Baruba were selected using purposive sampling. The informants were interviewed in group of six among KWASU Students. The findings of the study highlight the effectiveness of education in

promoting cultural diversity and community development. The study will benefit higher institutions, community leaders, inform education policy and practice in Kwara State and contribute to the broader field of educational research.

Keywords: education, cultural diversity, community development, Kwara State.

First Plenary Session / **38**

Biotechnological Approaches for the Production of Plant-Derived Vaccines

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Abstract

The development of plant-derived vaccines represents a promising approach in modern vaccinology, leveraging the unique capabilities of plants for efficient production, delivery, and immunogenicity enhancement. This review explores recent advancements and biotechnological strategies in the production of plant-derived vaccines, focusing on the utilization of plants as expression systems for recombinant antigens. We discuss various plant-based expression platforms, including transient expression systems such as viral vectors, agroinfiltration, and plant virus-based vectors, as well as stable transgenic plant systems. These platforms offer advantages such as scalability, rapid production, low cost, and ease of oral delivery, making them attractive alternatives to traditional vaccine production methods. Furthermore, the recent developments in plant genetic engineering, including gene editing techniques such as CRISPR/Cas9, for enhancing vaccine antigen expression, glycosylation patterns, and immunogenicity is highlighted. The strategies for antigen stabilization, encapsulation, and adjuvant incorporation to improve vaccine stability, antigen presentation, and immune response is also discussed. Additionally, preclinical and clinical studies evaluating the safety, efficacy, and immunogenicity of plant-derived vaccines against various infectious diseases and cancer are reviewed. Finally, the regulatory and commercialization challenges and future prospects of plant-derived vaccines, emphasizing their potential for global health impact, pandemic preparedness, and personalized medicine are discussed. Overall, this review highlights the significant progress and potential of biotechnological approaches in harnessing plant-based platforms for the production of safe, effective, and affordable vaccines.

Keywords:

First Plenary Session / **78**

Empowering Biology Teachers: Strategies for Implementing Curriculum Innovations in Sustainable Development

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Abstract

This study investigates the challenges encountered by biology teachers in public and private schools when integrating Sustainable Development (SD) concepts into their curriculum. It also explores strategies to empower these teachers effectively in implementing curriculum innovations. The study adopted quantitative paradigm, and specifically used descriptive survey research design. Two research questions and one hypothesis guided the study. The study adopted a purposive sampling procedure to select 102 respondents that participated in the study. A structured questionnaire was used to collect data. For data analysis, mean and standard deviation were used to answer the research questions while t-test statistics was used to test the hypothesis. Statistical Package for Social Sciences (IBM SPSS Statistics 21) aided in the analysis of the data. Results indicate significant challenges including overcrowded curriculum, resistance from school administration, and lack of support from educational institutions. However, empowering strategies such as interdisciplinary courses, workshops, and experiential learning opportunities are recommended to address these challenges. The study underscores the importance of investing in teacher professional development and raising awareness about the relevance of SD concepts in biology education. Recommendations are provided for educational authorities to prioritize the integration of SD into biology curriculum through collaborative efforts and targeted initiatives.

Keywords: Empowering, Biology Teachers, Strategies, Curriculum Innovations, Sustainable Development

First Plenary Session / **17**

Haptoglobin and Lipid Profile in Diabetic Nephropathy in Ilorin, Kwara State

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ABSTRACT

Background: Diabetic Nephropathy (DN) is a common cause of abnormal lipoprotein metabolism and can be influenced by impairment of renal function and metabolic controls in diabetes.
Aim: The aim of this study is to determine the level of Haptoglobin and Lipid Profile in Diabetic Nephropathy Patients. Subjects and Method: A prospective case-controlled study was carried out among Diabetic Nephropathy Patients and Control with a total number of 50 DN Patients and 50 Non-Diabetics control subjects respectively. Serum Glucose estimation was analyzed using Glucose Oxidase Peroxidase (GOD) method, Serum Haptoglobin was determined using a Nephelometric method while the Lipid Profile (Total cholesterol, Triglycerides, and HDL-cholesterol) was assayed using an enzymatic method of estimation, while LDL-cholesterol was calculated by Friedewald equation. Body Mass Index (BMI, kgm-2) was calculated from height and weight which were obtained from a questionnaire used to record the demographic features of all the participants/subjects.
Result: The results obtained show that serum glucose was significantly increased in Diabetic Nephropathy Patients (8.62 ± 1.34, $p<0.05$) when compared with control subjects (3.02 ± 0.88, $p<0.05$). There was also a significant increase ($p<0.05$) in mean Serum Haptoglobin (38.25 ± 6.67) in Diabetics when compared with control subjects (19.40 ± 3.92). A significant increase was also observed in Triglycerides in DN Patients with a mean of (0.77 ± 0.53, $p<0.05$) when compared to control subjects (0.63

± 0.26). However, there were no significant increases in Total Cholesterol and LDL-Cholesterol, with their mean value of (4.15 ± 1.27 and 1.95 ± 0.72) when compared to control subjects (3.59 ± 1.04 and 3.59 ± 1.04) respectively. While an insignificant decrease was observed in DN Patient's HDL-cholesterol mean value (0.81 ± 0.34) when compared to control subjects (1.18 ± 0.19). In this study, a strong statistically significant positive correlation was observed in Haptoglobin and Total cholesterol (R= 0.939, P= 0.015), HDL-C (R= 0.897, P= 0.025).
Conclusion: This study showed increased levels of Fasting Blood Glucose, Serum Haptoglobin, and Triglycerides increased Diabetic Nephropathy in Ilorin. Lipid control appears to be important in the prevention and treatment of Diabetic Nephropathy. This study suggests that serum Hp levels may be used as a potential biomarker for the early diagnosis of Diabetic Kidney Diseases in Diabetes Patients.

Keywords:

First Plenary Session / **70**

Curriculum Innovation for Sustainable Development

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Abstract
This paper delves into innovative curricula for sustainable development. Specifically, We aim to provide useful insights and motivation for the advancement of sustainability education system that empower learners to become informed, and proactive change makers in the development of a more just and sustainable global community. In the first section, the paper gives an overview The Need for Curriculum Innovation, The second section explores s Tools for Incorporating Sustainability into the Curriculum, while the third section discusses Identifying Barriers to Curriculum Innovation for Sustainable Development and Proposing Strategies to Overcome the Challenges. The paper discusses ways that interdisciplinary collaboration can enhance development of curriculum innovation for sustainable development in the fourth section. In the fifth section, the attention of the paper is on speculating on Future Trends and Advancements in Curriculum Design and Implementation for Sustainable Development in Nigeria. The paper later dealt with innovative curriculum; challenges and opportunities; and future prospects in innovative curriculum process and implementation for sustainable development respectively. In conclusion, various issues in innovative curriculum for sustainable development like multidisciplinary collaboration, active stakeholder involvement, thorough assessment and evaluation, and awareness of problems and challenges have been made clear by this paper. We recommend that curriculum development agencies should create curricula with an integrated, dynamic approach that is mindful of the shifting demands of sustainability and engage all stakeholders in meaningful discussions on crucial issues to ensuring the curriculum's impact and relevance. It is also important to support interdisciplinary research that presents various viewpoints on sustainability.

Keywords: Curriculum; Curriculum Innovation; Development; Pedagogue; Sustainability; and Sustainable development

First Plenary Session / 136

Antimicrobial Efficacy of Acetone Extract of Chrysophyllum album (African Star Apple) on Selected Clinical Isolates.

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ABSTRACT
Antimicrobial resistance is a problem many researchers and health scientists are grappling with, this necessitates the development of new antimicrobial agents. Interest in plants and plant's part with antimicrobial properties has increased. This study evaluates the antimicrobial efficacy of acetone extract of Chrysophyllum albidum (Cherry seed) on selected six clinical isolates Streptococcus pneumonia, Staphylococcus aureus, Pseudomonas aeruginisa, Escherichia coli, Candida albicans and Klebsiella pneumonia. Antimicrobial susceptibility test was carried out using agar well dilution method. The Minimum Inhibitory concentration (MIC) and Minimum Bactericidal Concentration (MBC) were done using macro broth dilution method and plating of the broth from the MIC respectively. The phytochemical study of the extract was analyzed qualitatively and quantitatively. The result of this study showed that, of the six isolates, S. pneumonia, S. aureus, P.aeruginisa, E. coli and C. albicans were susceptible to the antimicrobial agent and Klebsiella Pneumonia resist the antimicrobial agent at all concentrations used, with Staphylococcus aureus having the least zone of inhibition of 4mm at 500mg/ml. Candida albicans has the highest MIC value of 0.845mm at 2000mg/ml, and streptococcus pneumonia has the least MIC value of 0.400mm at 2000mg/ml and the extract has bacteriostatic effect. Phytochemical screening showed the presence of steroids, alkaloids, tannins, flavonoid, phenol, triterpene, saponin, but the absence of terpenoid. This study has shown that the acetone extract of Chrysophyllum albidum possess antimicrobial potentials against the isolated organisms used.

Keywords: Antimicrobial, Chrysophyllum album, susceptibility, dilution, phytochemical.

First Plenary Session / 94

Leveraging Technological Advancements for Interdisciplinary Educational Strategies and Sustainable University Education in Nigeria

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Abstract

In an era where technology is rapidly reshaping the educational landscape, Nigerian universities stand at the crossroads of convention and innovation. This paper delves into how these institutions can harness the potentials of technological advancements to not only transcend the barriers of conventional education but also to forge an interdisciplinary and sustainable future that bridges the gap between science, social science, and societal needs. Recognizing the crucial role of quality assurance in higher education, the article highlights the necessity of enhancing student enrollment, lecturers'retention, and overall administration to ensure enduring academic settings. Emphasizing technology-driven instruction, the article underscores the diverse advantages of incorporating technology into the academic curriculum, fostering innovative educational frameworks. It evaluates the various uses of educational technology, demonstrating its effectiveness in improving teaching methods across different fields of study. Particularly, it investigates the integration of technological models in education, illustrating how digital resources can enhance hands-on learning experiences and facilitate comprehensive comprehension. Furthermore, the article examines the capacity of educational technology to streamline the management of academic resources and optimize decision-making procedures in universities. Through the utilization of data analysis and digital platforms, institutions can improve resource distribution, track student advancement, and promote data-informed policy development. Ultimately, the article stresses the importance of collaborative efforts among stakeholders - governmental bodies, academic establishments, and educators - to ensure the availability of necessary infrastructure, resources, and training to support these transformative endeavors. By fostering an environment of creativity and digital literacy, Nigerian universities can not only progress sustainable educational methodologies but also cultivate a cohort of analytically adept learners ready to confront the intricacies of the contemporary global arena.

Keywords: Technological advancement, educational sustainability, Interdisciplinary

First Plenary Session / 116

Exploring the Impact of Artificial Intelligence on Future Job Markets in Nigeria

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Abstract

This study explores the impact of artificial intelligence (AI) on future job markets in Nigeria. A quantitative approach was adopted to collect data through a survey administered to 500 professionals and students across various sectors in Nigeria through Google form. The survey assessed participants' perceptions of AI's influence on job opportunities, job roles, and required skills in the coming years. The findings unveil a notable impact of AI on job markets in Nigeria. A majority of respondents, over 65%, anticipate a transformation in job roles due to AI, with an emphasis on automation and the demand for advanced technical skills. Approximately 52% of participants foresee potential job displacement as a consequence of AI implementation, while others envisage the emergence of new job opportunities in nascent sectors. Furthermore, the study identified a positive correlation between AI proficiency and employability, underscoring the importance of acquiring AI-related skills for future job market competitiveness. The study concluded that while AI presents challenges, it also offers opportunities for economic growth and innovation in Nigeria's job market. It emphasized the need for targeted education and training programs to equip the workforce with AI-related skills and ensure smooth transitions in the evolving job landscape.

Keywords: Artificial Intelligence, Job Market Transformation, Automation and Technical Skills, Employability and Economic Growth

First Plenary Session / 110

Influence Of Secondary School Biology Curriculum Innovation On Student's Interest And Performance In Nigeria

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Abstract

Curriculum innovation plays a crucial role in facilitating the student interest and performance. This study explores the influence of secondary school biology curriculum innovation on students' interest and performance in Nigeria using a mixed-method approach. A combination of quantitative and qualitative data was collected from a sample of secondary school students and teachers across Kwara State in Nigeria. The quantitative component involved administering structured questionnaires to 300 students to assess their interest in biology and performance following the implementation of curriculum innovations. Additionally, standardized test scores were analyzed to measure academic performance. The qualitative component included conducting semi-structured interviews with 20 biology teachers to gain insights into their experiences with curriculum changes and the perceived impact on students' engagement and learning outcomes. The findings reveal a positive correlation between innovative biology curriculum and students' interest and performance in the subject. Students exposed to the new curriculum demonstrated increased enthusiasm and improved test scores. Teachers also reported enhanced student participation and a greater understanding of key concepts. The study suggests that further curriculum innovation, coupled with teacher training and resource support, can lead to sustained improvements in students' interest and performance in biology across Nigerian secondary schools.

Keywords: Biology curriculum innovation; Student interest; Mixed-method approach; Teacher experiences and insights; Nigerian secondary education.

First Plenary Session / 172

Advancing Sustainable Development through Innovations in Science Education Curriculum in Nigeria

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Abstract

This research examined how innovations in the science education curriculum contribute to sustainable development in Nigeria. It addressed three key questions: (1) How do university lecturers view the integration of sustainable development principles into the science education curriculum? (2) What challenges do lecturers face in implementing sustainable development concepts in science education? (3) What recommendations can enhance the integration of sustainable development in the science education curriculum? The study surveyed 200 university lecturers in science education department in Kwara State. Findings revealed that 78% of lecturers strongly believe in the importance

of integrating sustainable development principles. However, 65% reported challenges like limited resources and curriculum constraints. Recommendations include specialized training workshops (85% agreement), curriculum revisions (72% agreement), and interdisciplinary collaborations (68% agreement) to tackle sustainability issues. This study underscores the significance of curriculum innovations in science education for fostering sustainable development in Nigeria and offers practical recommendations to address challenges and improve educational practices.

Keywords: Sustainable development, Science education, Curriculum innovation, Nigeria.

First Plenary Session / **62**

Community Engagement and Service Learning

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Abstract

The paper on "Community Engagement and Service Learning"exposes the researchers to fundamental concepts, theories of Community Development and their relevance in various contexts; analyze issues, trends in Development and addresses Community needs through comprehensive assessment techniques; provides design, plan and implement impactful Community projects using participatory approaches to ensuring projects are inclusive, equitable and sustainable through collaboration and engagement among Community stakeholders, leveraging volunteerism and partnerships for broader societal impacts to attain in-depth understanding of Community Development, its relevance to the Nigerian Society; and alignment with global and national Sustainable Development Goals (SDGs); it equips researchers with practical skills in identifying Community needs, designing projects, and implementing solutions that addresses these needs effectively; it fosters a sense of social responsibility, collaboration; and patriotism among researchers encouraging active participation in Community Development initiatives to enhance problem-solving abilities and critical thinking skills, especially in resource constrained settings to promote comprehensive understanding of ethical considerations in Community Development, ensuring respect for Community values and equitable participation. It uses modernization theory, structural Marxist's theory; and various Community Development Approaches-Bottom-Up, Community Development Critical (CD), Community Driven Development (CDD) and Places-Based Approaches. It reduces stereotype and greater intercultural understanding; improves social responsibility and citizenship skills; involving citizens in Community service; interpersonal identity, spiritual growth and moral development; ability to engage in team work to build leadership and communication skills; practical application of what is learnt in the real world to transform the Community; bridging the developmental gaps between the developed and the developing Communities across the globe.

Key words:

First Plenary Session / **365**

Determinants of Climate Change Adaptation Techniques Among Rice Farmers in Benue State, Nigeria.

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Abstract

Rice is a staple food in Nigeria and its production is hampered by climate change. Therefore, achieving bumper production in Nigeria requires adaptations to climate change. This study investigated the determinants of climate change adaptation techniques among rice farmers in Benue State. Primary data were obtained with the aid of structured questionnaires from 81 rice farmers in the study area. The data were analysed using descriptive statistics and multivariate probit regression. The descriptive statistics showed that about 79% of the farmers were male while approximately 90% were married. The mean household size was 6 and the average age was 50 years. The mean farming experience was 18 years while around 85% of the farmers had at least primary education. Moreover, about 36% of the respondents had farming as their major occupation. The average farm size was 2.7 hectares and about 73% had extension contact. The joint determinants of climate change adaptation measures were sex, age, farming experience, household size, farm size, major occupation, and extension contact. This study concludes that most rice farmers in Benue adopted alternative tillage and land fragmentation to adapt to climate change. This study recommends that extension agents should adequately train farmers in the study area on appropriate climate change adaptation strategies particularly farmers that not in full-time farming.

Keywords; Climate change; Adaptation techniques; Rice farmers; Benue State.

First Plenary Session / **430**

Challenges and Opportunities of Social Media Marketing of Agri-Business: A Study of Ilorin Metropolis.

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Abstract

Digital platforms have occupied a pivotal space in every human endevours in 21st century which Agri-business isn't exempted. This study delves into the challenges and opportunities of leveraging social media marketing within the agri-business sector of Ilorin metropolis. Agri-businesses in Ilorin are increasingly turning to social media to extend their market reach and enhance customer engagement. The research identifies significant obstacles, including digital literacy deficits, limited technological access, and insufficient online marketing expertise. It also addresses issues like unreliable internet connectivity and high digital device costs. Some farmers hesitate to shift from traditional to digital marketing due to doubts about social media's efficacy. However, the research highlights opportunities in social media marketing for agri-businesses, such as broader audience reach, enhanced brand visibility, and direct customer interaction. Social media offers a cost-effective way for agri-businesses to showcase products, engage with customers in real-time, and gather market insights. Utilizing social media analytics can refine marketing strategies to match customer preferences, boosting sales and satisfaction. The study employs surveys and interviews with agri-business owners and social media experts in Ilorin. Findings reveal that despite challenges, there is growing awareness of social media marketing's potential. The study advocates for training to improve digital literacy among agri-business owners and better access to affordable technology. It suggests collaboration between government, private sector, and NGOs to create condusive environment for digital marketing in agriculture. In summary, while social media marketing presents challenges for agri-businesses in Ilorin Metropolis, the opportunities for market expansion, customer engagement, and

growth are substantial. With proper support and resources, agri-businesses can effectively leverage social media to overcome barriers and harness its potential.

Keywords: Digital Marketing, Social-Media, Agri-business, Market-Expansion, Ilorin Metropolis.

First Plenary Session / **405**

Artificial Intelligence: An Indispensable Tool In Facilitating Creativity For The Sustenance Of Social Studies Education In Nigeria

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Abstract
Artificial Intelligence (A.I.) is an innovative technological approach that has continued to generate mainstream conversation in all spheres of education around the globe. Social Studies as a relatively new and innovative discipline in the curriculum of schools in Nigeria must continue to device means through creative ventures that can aid its sustenance as well as ensuring it is given its pride of place among school subjects. This paper examined the role of Artificial Intelligence as an inevitable tool for promoting creativity for the sustenance of Social Studies Education in the school curriculum. The study answered the question on how Social Studies Lecturers view Artificial Intelligence and creativity for the sustainability of the subject in the school system. Twenty Certified and seasoned Social Studies Lecturers, drawn from four tertiary institutions in Niger State made-up the respondents. A researcher-designed instrument was used for the collection of data. The instrument was validated by Social Studies experts, Language expert as well as test and measurement expert. The reliability of the instrument was established using the Split-Half method, having a reliability coefficient of 0.74 on AI in relation to creativity in Social Studies Education. The study revealed that very few Social Studies Lecturers have an in-depth knowledge of Artificial Intelligence. The respondents agreed that AI is capable of promoting creativity for sustaining Social Studies Education in the tertiary educational system in Nigeria. Conclusion was drawn and recommendations were proffered based on the findings of the study.

Keywords: Artificial Intelligence; Creativity; Social Studies Education

First Plenary Session / **147**

Cucumis sativus Fruit Homogenate's Hepatoprotective Effects on Augmentin-Induced Liver Toxicity in Wistar Rats

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Abstract
Augmentin, a commonly prescribed antibiotic, poses a risk of liver toxicity, highlighting a significant health concern. This study aimed to explore the potential hepatoprotective effects of cucumber (Cucumis sativus) fruit homogenate against Augmentin-induced liver toxicity in Wistar rats.

Thirty-six rats were randomly assigned to six groups: Control, Augmentin-induced (receiving distilled water), silymarin treated + Augmentin-induced, low dose of C. sativus homogenate treated + Augmentin-induced, high dose of C. sativus homogenate treated + Augmentin-induced and Non-induced (receiving C. sativus homogenate). Evaluation encompassed phytochemical analysis of the homogenate, liver function parameters, and histological changes. Results revealed the presence of alkaloids, steroids, glycosides, terpenoids, and saponins in the homogenate. Augmentin administration induced hepatic injury, evidenced by elevated serum liver enzymes and altered histology. However, supplementation with C. sativus fruit homogenate mitigated these effects, leading to decreased liver enzyme levels and improved histological architecture. These findings suggest the potential hepatoprotective properties of C. sativus fruit homogenate against Augmentin-induced liver toxicity, possibly attributed to its phytochemical constituents. Further investigations are needed to delineate the underlying mechanisms and clinical implications of these observed effects.

Keywords: Cucumis sativus, fruit homogenate, Augmentin-induced, hepatoprotective, Liver toxicity,

First Plenary Session / **214**

Effective Governance and Management of Tertiary Education for Socio-Economic Development in Nigeria

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Abstract

This paper discussed the lack of effective governance and management in tertiary education institutions in West African countries, specifically focusing on Nigeria. It argued that while these institutions had produced programs to meet the labor market's needs, educational policies and curriculum reforms had not kept pace with economic and political development. This had resulted in a brain drain as university professionals sought better opportunities elsewhere. The study aimed to address the role of university stakeholders in Nigeria's social and economic development, in line with sustainable development goals. It utilized a descriptive research design and secondary data. The authors suggested that university elites and professionals should be allowed to participate in political and economic contributions towards national development without political affiliation or intimidation. This would improve and increase Nigeria's socio-economic development. The authors highlighted the importance of effective governance and management in tertiary education institutions, as seen in developed countries where they contributed significantly to socio-economic development. The current denial of political and economic contributions by university professionals has hindered progress in Nigeria. In conclusion, the authors emphasized the need for a national policy that allowed professionals from tertiary institutions to participate in political and economic roles in order to contribute to the country's national development. This would improve Nigeria's socio-economic development and address the brain drain issue.

First Plenary Session / **8**

Financing Sustainable Ventures: The Intersection of Investment and Social Responsibility

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ABSTRACT
This study explores the intersection of investment and social responsibility in financing sustainable ventures. The study looked at the current state of investment in sustainable ventures, identified and evaluated the criteria used by investors to assess the sustainability of ventures and analyzed the impact of government policies, regulations, and incentives on promoting investment in sustainable ventures. Cross section survey was used as the study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through self- administered questionnaire. The sample size of one hundred and thirty seven (137) was arrived at using the Soper A-priori Sample Size Calculator. The sampling procedure used in this study was the simple random sampling technique. The research instrument was validated by experts and approved while the reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the linear regression with the aid of SPSS. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The findings revealed that the intersection between investment and social responsibility in financing sustainable ventures was significant. The study recommends that workshops and roundtable discussions with investors, sustainability professionals, and academics should be organized to identify and prioritize key criteria and metrics for sustainable investment. Stakeholders should develop policy recommendations aimed at creating an enabling environment for sustainable investment, including targeted tax incentives, subsidies, and regulatory reforms.
Keywords: Financing, Investment, Social Responsibility and Sustainable Ventures

First Plenary Session / **30**

Multiple-Drug-Resistant Salmonella Isolation from Ready-to-eat Canteen-meat and Need for Intervarsity Collaboration in Salmonella-Surveillance

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Abstract

Salmonella, an ubiquitous, rod-shaped, gram-negative facultative anaerobic bacterium belong to the Enterobacteriaceae family. It is a common cause of foodborne illnesses at local, regional and global levels. It can be transmitted through the consumption of contaminated or undercooked food items, including ready-to-eat offal. Salmonella spp. pose a significant risk to human health, especially through the consumption of contaminated products, which may result in illnesses such as typhoid fever, gastroenteritis, or septicaemia.
This research aimed to contribute to the body of knowledge on the surveillance of the organism by isolating Salmonella spp. from ready-to-eat rectum (abodi) samples sold in canteens/restaurants within Ilorin metropolis, Kwara State, Nigeria, and to determine the antimicrobial resistance status/ resistance patterns of the isolated Salmonella spp. from ready-to-eat offal in the study area.
To achieve these, a total of 112 ready-to-eat rectum (abodi) samples were collected and analysed using conventional isolation methods. The antibiotic susceptibility test was carried out on the isolate using the disc diffusion method. One (0.9%) Salmonella spp. was isolated from the samples collected. The Salmonella isolate was resistant to tetracycline, amoxicillin, ampicillin, oxytetracycline, erythromycin and penicillin G. The isolate was sensitive to gentamicin, ofloxacin, chloramphenicol and sulfamethoxazole.
There is a need for inter varsity-linkages collaboration in Salmonella research, and public education

on the proper handling of meat products. Concerned government agencies should assume responsibility for monitoring the hygiene and sanitation practices in restaurants and canteens within the study area to mitigate the risks associated with Salmonella contamination.

First Plenary Session / **44**

Dynamics of Plasma Osmolality and Arginine Vasopressin Profile in Response to Waterload in Healthy Human Male Subjects

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Abstract

Thirst is defined as a generalized cravings or deep-seated feelings of a desire for water. It is an essential mechanism involved in water balance. It arises from a lack of water or an increase in the concentration of certain osmolites, such as salt and it is detected by specialized receptors called osmosodium receptors or osmoreceptors located in the anterior hypothalamus near the supraoptic nuclei. Thirst act along with arginine vasopressin to maintain plasma osmolality within a narrow range.

Thirst perception (TP), Plasma Osmolality (Posm) and Arginine vasopressin (Pavp) were estimated in healthy male subjects (n=30) before and after waterload using the visual analogue scale (VAS). The visual analogue scale is an index of TP, and acts as an indirect method for the estimation of Plasma Osmolality.

TP, Posm and Pavp significantly increase after an overnight fast. However, 30minutes after waterload, the values of the corresponding TP, Posm and Pavp decreases and showed a progressive increase until around 150minutes and was found to be significant using $P< 0.05$ at 20mL/KgH2O body weight.

Key words:

First Plenary Session / **46**

Handgrip Strength as a Screening Tool for Diabetes in Resource-constrained Settings: A Potential Solution to Overcome Barriers to Diagnosis.

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Abstract

Background
Diabetes mellitus is an escalating global health concern, especially in low and middle-income countries. Handgrip strength (HGS), a measure of muscle strength, emerges as a potential non-invasive and affordable screening tool for diabetes, particularly in areas with limited healthcare access.
Objective
This study aimed to investigate the relationship between handgrip strength and blood glucose regulation in non-diabetic young adults and to provide valuable insights into the potential of handgrip strength as a preventive and affordable approach to managing diabetes.
Materials and Methods
This is a cross-sectional study of University of Ilorin students aged 18-21 in Nigeria. Handgrip strength was measured with a dynamometer, and its links to blood glucose markers (fasting blood glucose, 2-hour post-prandial glucose, and HbA1c) were explored using multiple regression models.
Results
Findings revealed significant associations between HGS and glucose regulation markers, particularly FBS, among males. The relationship was evident in females only after adjusting for body mass index (BMI). Furthermore, a notable relationship between HGS and 2-hour post-prandial glucose levels was observed in females but not males. However, no significant associations were found between HGS and serum insulin levels across genders.
Conclusion
Our study introduces handgrip strength (HGS) as a practical, cost-effective screening tool for blood glucose regulation disorders in resource-constrained settings. However, the study's limitations, such as a small sample size and demographic restrictions, underscore the need for future research to validate HGS's real-world efficacy in diverse populations.

Keywords:

First Plenary Session / 48

Fostering Sustainable Futures: Interfaith Dialogue in Joint University-Industry Initiatives.

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Abstract:

In today's interconnected world, achieving sustainable development requires collaboration across various sectors and communities. This study explores the role of interfaith dialogue within collaborative efforts between universities and industries aimed at shaping a sustainable future. The study aims to investigate how interfaith dialogue enriches and strengthens sustainability initiatives within academic-industrial partnerships, ultimately contributing to the advancement of sustainable development goals. The objectives were: (i) to examine the significance of interfaith dialogue in promoting understanding and cooperation among stakeholders with diverse cultural and religious backgrounds; (ii) to identify best practices and case studies demonstrating the effectiveness of interfaith collaboration in addressing environmental, social, and economic challenges; (iii) to highlight the importance of integrating interfaith perspectives into educational curricula and corporate sustainability strategies; (iv) to provide recommendations for incorporating interfaith dialogue into joint university-industry initiatives for sustainable development. The findings of the study reveal that interfaith dialogue catalyzes innovative solutions and promotes inclusivity in sustainability efforts. Case studies demonstrate the transformative potential of interfaith collaboration in addressing complex sustainability challenges. Recommendations include: integrating interfaith dialogue into educational frameworks and corporate sustainability practices, fostering a culture of inclusivity, and leveraging diverse perspectives for sustainable development. The study concluded that interfaith dialogue holds promise as a tool for building bridges of understanding and cooperation across faith traditions, contributing to a more equitable, resilient, and sustainable future for all.

Keywords: Interfaith Dialogue, Sustainability, Academic-Industrial Partnerships, Collaboration, Sustainable Development

First Plenary Session / **169**

Estimating the Gamma-Exponential Distribution's Performance Metric and its Application to Fatigue Time Data

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Abstract

It is important to consider the utility of statistical distributions while assessing and forecasting real-world
events. Numerous scholars have examined real-world data using various statistical distributions. Consequently, the
application of the recently created Gamma-Exponential distribution to modeling data on fatigue duration of 101 6061-
T6 aluminum coupons cut parallel to the rolling direction and oscillating at 18 cycles per second (cps) was the main
emphasis of this study. A comparison was made between the Gamma-Exponential distribution's performance and
suitability and other statistical distributions that are currently in use. The outcome demonstrated that the GammaExponential distribution fits data more accurately and is sufficient when compared to other existing distributions.
Index Terms- Gamma-Exponential distribution, Fatigue time, AIC, BIC, Log-Likelihood

First Plenary Session / **87**

Exploring Green Waqf As An Alternative Finance For Renewable Energy In Nigeria: The Need For Strengthening Legal Framework

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Abstract

The significance of steady power supply in a nation cannot be underestimated. This is because such facilitates sustainable economic growth and job creations. Currently, Nigeria experiences unreliable conventional power grid, which culminates into incessant epileptic power supply in the country. This phenomenon has crippled economic growths and engendered employments loss of many Nigerians. Meanwhile, Nigerian government has been intensifying efforts to harness by 2030 renewable energy systems, which can offer a more stable and reliable source of power, but without desirable results. Unlocking the necessary capital will necessitate synergy between government and the private

sector. Thus, this study seeks to examine the potential of exploring green waqf as a viable source of financing renewable energy projects in Nigeria. It also provides case studies of other countries where green waqf has been successfully implemented, and draws lessons that can be applied to the Nigerian context. The study adopts content analysis and thus relied on both primary and secondary sources of law, articles in journals, internet materials and text books. By analyzing the existing legal framework, the study revealed that there is a lack of a legal framework that can effectively support and promote this concept. Therefore, the study concludes that there is the need for strengthening the legal framework to fully harness the potential of green waqf in promoting sustainable and environmentally friendly energy solutions. The study provides recommendations for policymakers and stakeholders to further develop and implement a robust legal framework for green waqf in Nigeria.

Key words: Renewable energy, Nigeria, Green waqf, Legal Framework

First Plenary Session / **34**

Effects of gamma irradiation on five days submergence tolerance of two selected varieties of lowland rice (Oryza sativa L.)

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Abstract

The objective of this study was to evaluate the impact of varying doses of gamma irradiation on agro-morphological characteristics during simulated flooding of two rice varieties (FARO 44 & FARO 60), aiming to determine the most effective radiation dose for inducing genetic variability for submergence tolerance. Seeds of FARO 44 and FARO 60 were sourced from the National Cereal Research Institute (NCRI) in Badeggi, Nigeria, and subjected to different doses of gamma irradiation (0, 50, 100, 150, & 200 Gy) at the Center for Energy and Research Training in Zaria, Nigeria. The treated and control seeds underwent submergence evaluation in a Randomized Complete Block Design with four replicates each. Each experimental container was submerged for 5 days and allowed to grow until harvest after the submergence period. Results indicated that gamma irradiation significantly ($P \leq 0.05$) improved the survival rate of FARO 44 after submergence, with 150 Gy and 200 Gy resulting in the highest survival percentage (93.75%) compared to the control (68.75%). Irradiation doses of 150 and 200 Gy had significant positive effects ($p \leq 0.05$) on the plant height and yield of FARO 44. In the case of FARO 60, 200 Gy and 150 Gy doses of gamma irradiation (100 Gy) significantly ($p \leq 0.05$) influenced the days to 50% flowering and weight of 100 grains (g) respectively. Additionally, gamma radiation doses of 150 Gy and 200 Gy were observed to positively impact the submergence tolerance indices of FARO 44. Further research is recommended to explore the submergence tolerance of the promising mutants identified in this study.

Keyword:

First Plenary Session / **252**

Assessing Energy Poverty: Measurement, Determinants, and the Impact on Energy Deprivation in Nigeria

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Abstract

Energy poverty significantly undermines the quality of life and economic productivity, particularly in developing contexts such as Nigeria. This explorative study uses university lecturers in Kwara State as a case study to assess the extent, determinants, and impacts of energy poverty within these educated elites. By spotlighting this specific group, the research emphasises the importance of addressing energy poverty, even among those who are highly educated and influential people. The study employs a case study approach, utilizing quantitative and qualitative methods to comprehensively analyse energy deprivation. Quantitatively, the study will utilise a tailored Energy Poverty Index (EPI) to measure the prevalence and severity of energy poverty among lecturers. Qualitatively, interviews will be conducted to explore the subjective experiences of energy poverty, capturing its impacts on professional responsibilities and personal lives. The impact analysis will focus on the repercussions of energy poverty on academic productivity, health, and socio-economic well-being and will be analysed using structural equation modelling. The findings are expected to provide a comprehensive understanding of energy poverty among higher education professionals, offering evidence-based recommendations for policy interventions. By addressing the specific needs of university lecturers in Kwara State, this research will contribute to broader efforts to mitigate energy deprivation in Nigeria, ensuring that educational practitioners can fulfil their potential in both professional and personal spheres.

Keywords: Energy poverty; Energy deprivation; Structural equation modelling.

First Plenary Session / **220**

Shaping Sustainable Future Connecting Universities and Industries through Joint Initiatives; Counselling for Unity of Purpose

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Abstract

The United Nations set a standard definition of Sustainable Development that will not only generate an environment of prosperity for people's wellness to be reached but set them in the focus of credible leadership essence for continuity in posterity. Shaping Sustainable Future connecting Universities and Industries through joint initiatives becomes highly imperative in this era of global competitiveness where collaboration is key to Sustainable Development. This is evident in the fact that no meaningful, durable and Sustainable landmark can be achieved single handedly except by collaboration in specific areas of expertise. There is need for emphasis on university specialization in specific areas of interest that will enhance unique contributive capacity of each University to humanity. It has also become inevitable to ensure Town and Gown synergy through joint initiatives. This is only possible if there is unity of purpose and harmonization of resources. Counselling professionalism is therefore a unification factor as it can serve as a functional link between the Universities and industries using various psychological instruments for placement services and Guidance services required for high level of productivity as well as securing a sustainable future for products of such joint initiatives. The paper therefore recommends unity of purpose if our aspirations will not be a tantalizing mirage!

Keywords: Sustainable Future, Universities, Industries, Counselling Professionalism, Joint Initiatives, Unity of Purpose.

First Plenary Session / 163

The 2024 Food Price Crises in Minna: Re-Thinking Food Security Policies

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Abstract

This paper examines the 2024 food price crises in Minna, identifying long and short term causes as well as two factors which distinguish the 2024 food price increases from earlier episodes of diversion of food crops during COVID 19. The paper contends that while most attention has been on agricultural production and increases demand from neighboring states. It then explores the impact of several factors including systemic decline in investment in agricultural productivity and technological advancement. Primary and secondary data were used in generating relevant data. The primary data was source with the aid of a questionnaire while the secondary data were obtained through the library documented materials such as journals, text books, magazines and on-line resources. The sample size of 381 respondents was taken based on Krejie and Morgan (1970) sample table. The sample technique adopted was stratified and simple random sampling technique. The paper used simple table, percentage, frequency table and logistic regression in the analysis of data for study. Cronbach alpha reliability test was performed and the results shows that the measurement reached high reliability coefficient of 0.84 and study revealed that food insecurity in 2024 was cause as a result of removal of subsidy, differences in exchange rate and attitude of business men which causes artificial scarcity and inflation in the country. Based on that, the article recommended improving program me and policies that ensure proper management of food, farmers should be encouraged to produce more farm produce and government should create an enable environment for them. with legislation to fight against hiding of food in the stores.

Keywords: Security, food security, crises, and policies

First Plenary Session / 341

Health Effects of Excessive Screen Time on University Lecturers in North Central Nigeria

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Abstract:

Screentime describes the amount of time an individual spends watching or operating an electronic device with a screen and excessive exposure to screentime has been correlated to trigger some mental health conditions i.e., technostress. This research aims to elucidate the health consequences of

excessive exposure to screen on the quality of health of university lecturers in North-central Nigeria. A prepared digital questionnaire comprising of demographics, health effects, and institution ergonomic support was sent to university lecturers'digital platforms across the North-Central Nigeria states. Standardized mental health evaluation technique was utilized to assess the of quality health enjoyed by lecturers. Correlations, Mann-Whitney tests, and multivariate regression were used to investigate the relationship between screen time, and anxiolytic tendencies. Preliminary results from the male dominated 89 respondents revealed that 39% are lecturer II and below with average academic experience between 11 –15 years, taking at least three courses per semester. Laptops and mobile phones are the most used devices among lecturers and over half of the respondent spend between 4 –6 hours daily on their devices taking screen breaks every hour. Despite high percentage engagement in physical activities, majority of the respondent experience mental fatigue, mood changes and body pains. Screen time as the data reveals may be stressful for the lecturer in North-central Nigeria.

Keywords: Screentime, technostress, university lecturers, Nigeria

First Plenary Session / **150**

Vocational Studies And Entrepreneurial Performance Of Smes In Irepodun Local Government Area Of Kwara State Nigeria

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ABSTRACT
Small and Medium Scale Enterprises (SMEs) serve as vital contributors to the local economy, and vocational education and training programs have emerged as a potential solution to equip aspiring entrepreneurs and existing SME owners with the requisite skills and knowledge to thrive in their ventures. However, despite the potential benefits of vocational studies, there is a paucity of research examining their impact on entrepreneurial performance, particularly within the context of SMEs in Irepodun Local Government Area. Most of the existing studies primarily focus on larger enterprises, thereby overlooking the unique challenges and opportunities faced by SMEs in this specific region. Therefore, this study examines the impact of vocational studies on the entrepreneurial performance of Small and Medium Scale Enterprises (SMEs) within the Irepodun Local Government Area of Kwara State, Nigeria. The population of the study consists of all registered Small and Medium Scale Enterprises (SMEs) domiciled within the Local Government area. Cochran (1977) sample size determination technique was used to arrive at a sample size of 384 respondents. The hypotheses were tested using multiple regression model. Findings revealed that dimensions of vocational studies such as skills acquisition and entrepreneurial competencies have significant impact on entrepreneurial performance in terms of customer acquisition cost and operational cost efficiency of SMES respectively. The findings provide valuable insights for policymakers, educators, and SME owners seeking to promote entrepreneurship and economic development through vocational education initiatives.
Keywords: Entrepreneurial Performance, Skills Acquisition, Entrepreneurial Competencies, Customer Acquisition Cost, Operational Cost Efficiency

First Plenary Session / **255**

Corruption and legislative oversight in Nigerian Universities: A Systematic Review

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ABSTRACT:

Corruption is a cankerworm that has deeply eaten the fabric of an individual to the state of stupor, bogus in Nigerian society especially the university education system. This study examines the corruption and legislative oversight in Nigerian universities. The study depends on secondary data, researcher personal observation based on his experience as a university lecturer. The data were collected from print and online publications. Content analysis was employed for data analysis. The structural-functional theory was used in analysing the subject matter. The study revealed that corruption has negatively affected the quality of university education through symptoms like mismanagement of available funds, infrastructural deficits, increase in the administrative cost of running university education, shortage of qualified academic staff, and ultimately poor quality of university education product. The study recommends among other things that, The study further recommended that the legislative institution should be allowed to develop and attain maturity as evident in the advanced democracies with an eye to produce a crop of legislators who have the capacity to execute their legislative oversight responsibilities regardless of whose ox is gored. The Federal Government of Nigeria and the state government should employ the service of an integrity-based non-governmental organisation to monitor the activities of the various public universities to reduce corrupt practices in procurement, promotion, award of contracts and in other academic activities in the country.

Key words: Corruption, Legislative oversight. University Education, Government Democratic Practice, Nigeria

First Plenary Session / **96**

Effect of Aqueous Extract of Phoenix dactylifera fruits on the haematology and histology of selected tissues of acetaminophen-induced hepatotoxic rats

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Abstract

Introduction and Purpose: Hepatotoxicity is a condition whose prevalence is rapidly increasing everyday worldwide. Therefore this study was carried out to determine the effect of aqueous extract of the fruit of Phoenix dactylifera in acetaminophen-induced hepatotoxic rats. Materials and Methods: Thirty (30) rats with average weight of 200 ± 8g were distributed into two (2) groups (A and B). Group (A) served as the control (five rats) and were treated with distilled water while animals in the second group were subdivided into five groups (B-F). Animals in group B were all administered with 750mg/kg body weight of acetaminophen. They were thereafter treated with distilled water, 140 mg/kg body weight of silymarin, 100, 200, and 400 mg/kg body weight of aqueous extract of Phoenix dactylifera fruit respectively for a period of 28-days. The animals were sacrificed and all analysis were carried out using standard procedures. Results: For the haematological profile, there was no significant increase ($p < 0.05$) in many of its indices when the control and the standard drug groups were compared with the test groups. In the same vein, histological examination of the liver tissues of the test groups also showed a good morphological/physiological changes that compared

favourably ($p > 0.05$) with the control. Conclusion: This study therefore revealed that the aqueous extract of Phoenix dactylifera fruits may efficiently ameliorate hepatotoxicity.

Key words: Phoenix dactylifera, Acetaminophen, Haematological, Histological , Silymarin

First Plenary Session / **118**

Influence of Islam on Socio-Religious Life of People of Osi

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ABSTRACT

Osi as other towns in Yoruba land was once without Islam. This paper examined the influence of Islam on the socio-religious activities on the people of Osi. Before Islam in Osi, Osi people practised traditional worshipping. It was widely spread in Yoruba land and Osi inclusive. In this paper, the advent of Islam was traced through the activities of Muslims from Ilorin and Igbaja. Historical research method was adopted in obtaining information. The finding revealed that population of Muslims in Osi has increased, thus, the socio-religious activities have been greatly influenced. Even, the non-Muslims of Osi have been informed of the Islamic culture and practices. It was also observed that Osi people practised their socio-religious activities the same way other Yoruba tribe did. With the advent of Islam, socio-religious activities such as ritual acts, festivals, naming ceremony and inheritance have been influenced. This paper concluded by recommending that the Muslim scholars needed to intensify effort in the area of Islamic propagation for the remaining non-Muslims, especially the traditional worshippers to be convinced that Islam is a complete way of life.

Keyword: Socio-religious activities, non-Muslims, Islamic culture, traditional worshipping, Osi.

First Plenary Session / **101**

Molecular Identification of Ticks in ruminants and wildlife animals

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ABSTRACT

Ticks are common ectoparasites that feeds on blood of their vertebrate hosts thereby cause various clinical manifestations including tissue injury, body paralysis, and sometimes anaemia during massive infestations. Ticks are closely similar in general body form to parasitic mites and despite the veterinary and medical importance of tick species, there is limited information about its species distribution and molecular diversity in domestic, captive and wildlife animals in Ilorin, Northcentral Nigeria. This study therefore investigated species distribution and molecular diversity of tick species using a combination of morphological and molecular approaches. Ticks were collected from

ruminants and wildlife animals across Nigeria. Samples were morphologically and molecularly identified using standard methods and then screened for the presence of pathogens. A total of 169 tick species were collected and sorted into their genera Rhipicephalus following morphological identification. All the species collected and identified to species level by molecular method using two different molecular markers namely cytochrome oxidase subunit I and 16S rDNA by PCR amplification. Analysis of relative species composition showed that Rhipicephalus boophilus was the most predominant species collected (57.8%) after morphological identification. Our molecular analysis revealed that all the expected bands for Rhipicephalus boophilus decoloratus. This is an indication that Rhipicephalus boophilus decoloratus is the most abundant among the tick spp in our sampled locations. Other species observed were Rhipicephalus evertsi sp, Hyalomma dromedarii, Amblyomma sp and Ornitodorox sp. This study concludes that ticks are better identified using both morphological and molecular methods. This study suggests that there should be intensified efforts and control strategies put in place by veterinary public health officers and zoological garden staff members to effectively control ticks in order to prevent transmission of tick and associated pathogens that are of public health concerns to livestock and human.
Keywords: Rhipicephalus boophilus decoloratus; Rhipicephalus evertsi sp; Polymerase Chain Reaction; Phylogeny; Hyalomma dromedarii; Amblyomma sp; Ornitodorox sp.

First Plenary Session / **184**

Poetry, Islam and The Society: A Postcolonial Study

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Abstract

The poets in the contemporary society exhibit quintessential attributes of preachers in their poems through their identification of evils in the society and advocacy for change, in order to make the society habitable for the people. They use their poems to demonstrate virtues of uprightness and deploy them to condemn evils, vices and illicit practices in the society. Some of the contemporary poets, even though they are non-Muslims, use the literary art to project the tenets of Islam as their poems reflect the injunctions of the Qur'ān, the guidance of Prophet Muhammad, and the virtuous path of the guided souls. Hence, the contemporary poets replicate the Sharī'ah teachings in their literary prowess. So, through the use of historical and analytical methods of research, this paper examines the poems of Henry Barlow, Richard Ntiru and Theo Luzuka using Postcolonial literary studies as a theoretical framework. The paper juxtaposes the thematic preoccupation of the poems with the Sharī'ah. The paper reveals that the poets'advocacy of good governance, righteousness and morality is in tandem with the tenet of Islam. It is concluded that virtues and vices are same in every society regardless of norms, culture, ethnic, status and religion. The paper therefore recommends a moralistic approach to the study and writing of poems in Nigerian tertiary institutions with a view to building an ideal personality to develop the nation.

Keywords: Poem; Islam; Impoverishment; Corruption;Governance

First Plenary Session / **2**

Bioactive Components, Nutritional Properties, and Antimicrobial Activities of Non-Fermented and Fermented Seeds of Vitis vinifera

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ABSTRACT

The fermented and non-fermented seed powder of Vitis vinifera, a herbaceous plant with numerous biological activities was investigated in this study for the pH, in vitro antimicrobial activities against Staphylococcus aureus, Escherichia coli, and Candida albicans by Minimum Inhibition Concentration (MIC) / Minimum Fungicidal Concentration (MFC) and disc diffusion assay methods, phytochemical and proximate compositions. The active compounds of the fermented sample were further evaluated by High-performance liquid chromatography (HPLC). A decline in pH (6.2 - 3.6) was recorded during fermentation for 14 days. Varying MIC/ MFC ranges of 12.5 –25.0 mg/mL and 12.5-100.0 were noted for the fermented and unfermented samples, respectively. The fermented sample exhibited appreciable antimicrobial effects with varying inhibition zones at tested concentrations of 100 mg/mL (10.0-18.0 mm), 50 mg/mL (8.0-15.0 mm), and 25 mg/mL (6.0-12.0 mm) than the unfermented sample with inhibition zone at concentrations of 100 mg/mL, 50 mg/mL, and 25 mg/mL being 2.0-3.0 mm, 0.0-2.0 mm, and 0.0-2.0 mm, respectively. Ash, fat, and protein content increased with fermentation than moisture, fiber, and carbohydrate content. Alkaloids, anthraquinone, flavonoids, glycosides, saponins, tannins, and terpenoids were detected in the fermented sample while alkaloids, flavonoids, glycoside, saponins, and terpenoids were detected in the non-fermented sample. Gallic acid, quercetin, catechin, quercitrin, and epicatechin were detected by HPLC in the fermented samples. Conclusively, fermented and non-fermented samples of V. vinifera have antimicrobial activities, however, the acidity of the fermented sample may contribute to its better activity and higher components. Thus, their relevance as promising antimicrobial agents.
Keywords: Escherichia coli, Fermentation, HPLC, Protein, Vitis vinifera

First Plenary Session / 80

Law Enforcement Agencies and Security Challenges in 21st Century Nigeria

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Abstract

Nigeria's law enforcement agencies confront a myriad of security challenges in the 21st century, rooted in historical legacies and contemporary dynamics. This paper delves into the historical evolution of security issues in Nigeria, tracing from the Biafra Civil War to the emergence of Boko Haram and economic crimes. Major challenges encompass terrorism, kidnapping, cyber threats, communal tensions, and corruption. The roles of key security agencies, such as the Nigerian Police Force and the Nigerian Armed Forces, are examined alongside the persistent hurdles they face, including resource constraints, corruption, and jurisdictional disputes. Strategies aimed at bolstering law enforcement effectiveness are outlined, including modernization initiatives, anti-corruption efforts, enhanced collaboration, community-oriented policing approaches, technology integration, international cooperation, and judicial reforms. By comprehensively addressing these challenges, Nigeria can fortify its security apparatus and mitigate the diverse threats it encounters in the contemporary era.

Keywords: 21st century, Nigeria, Law enforcement agencies, Security challenges, Terrorism

First Plenary Session / 121

Ict and Gender Inequalities in Nigerian Universities

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Abstract

This study explores the intricate connection between gender inequality and Information and Communication Technology (ICT) in Nigeria Universities. ICT has developed into a potent weapon in the current digital era that has a substantial impact on many facets of society, including social inclusion, employment, and education. However, there are still gender-based differences in access to and use of ICT resources, which exacerbates already-existing gender disadvantages. This study explores the main aspects of this problem, including the digital gender gap, technological stereotypes, and the underrepresentation of women in the STEM disciplines. It also explores how ICT can empower women and eliminate gender gaps when used effectively. This study was carried out through an in-depth examination of the literature, case studies and the administration of a questionnaire. Findings reveal that 83.5% of the Nigerian Universities face gender inequality in ICT fields.

Keywords: STEM, ICT, Women and Gender Inequalities.

First Plenary Session / 289

Integration of Artificial Intelligence in Developing Communication Skills for Industrial Growth

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Abstract:

Scholars have noted a significant gap between academia and industries, particularly in sub-Saharan Africa, hindering industrial growth and sustainable development due to underutilization of university research. This paper aims to bridge this gap by exploring the integration of artificial intelligence (AI) technologies to enhance communication skills in the industrial sector. It investigates how AI can be leveraged to generate appropriate responses, foster meaningful conversations, and adapt communicative styles to improve client-customer relationships and promote industrial growth. Theoretical frameworks for the study are drawn from natural language processing, machine learning, and algorithms. Findings from this study focus on enhancing client-customer relations, fostering cultural understanding through translation tools, and developing critical thinking skills among stakeholders in business industries. In conclusion, the paper underscores the benefits of integrating university research into the industrial sector.

Keywords: Artificial intelligence, natural language processing, communication skills, communicative competencies, industrial growth

First Plenary Session / 145

Analysis of Impact of Agripreneurship Initiatives on Youth Unemployment in Nigeria: Case Studies and Policy Recommendations

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Abstract

Addressing the pervasive issue of youth unemployment in Nigeria necessitates innovative approaches, among which the resurgence of agricultural entrepreneurship stands out. This study explores how agripreneurship initiatives contribute to economic development and social well-being by mitigating unemployment in Nigeria. The study adopts a case study method to provide detailed examples of successful agripreneurship initiatives and their impact on youth unemployment. By examining case studies of different agripreneurship initiatives, the study offers insights into the current state of unemployment in Nigeria and the potential of agripreneurship to address this challenge. While the findings highlight the positive impact of agripreneurship programs, the study acknowledges several challenges that must be addressed. These include limited access to finance, infrastructure constraints, and market dynamics. Ultimately, the study proposes a comprehensive framework for combating youth unemployment in Nigeria's agricultural sector. Policy recommendations include increasing access to finance for aspiring agripreneurs, improving rural infrastructure to support agricultural activities, and fostering the market linkages for agricultural products.

Keywords: Agribusiness; Agripreneurship Initiatives; Nigeria; Youth Unemployment.

First Plenary Session / 105

Entrepreneurship Competencies on Operational Cost Efficiency of Small and Medium Scale Enterprises in South-West Nigeria

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Abstract

SMEs play a vital role in Nigeria's economy, driving job creation, innovation, and poverty reduction. However, literature have shown that in the South-West region, these enterprises face a critical challenge due to skill gaps in entrepreneurship competencies. This problem inhibits their capacity to manage costs efficiently and compete effectively in the market. Therefore, this study examines

the effect of entrepreneurship competencies on the operational cost efficiency of small and medium scale enterprises (SMEs) in South-West Nigeria. Employing a descriptive research design, data was collected through questionnaire from 384 out of a total 132,749 SMEs operators domiciled and that were registered with SMEDAN within the region. Multiple regression analysis was used to analysed the data. Findings showed that training and development, technology utilization competency and financial management competency have significant and positive effect on operational cost efficiency (R2= 0.768; β = 0.249; t=16.486, p<0.000). The study concludes that entrepreneurship competencies have significant effect on operational cost efficiency. The study recommended that there should be a concerted effort by governmental bodies and educational institutions to further provide comprehensive entrepreneurship education and training programs that focus not only on theoretical knowledge, but also on practical skills development in areas such as financial management and technology utilization mechanisms that facilitate operational efficiency for SMEs Operators in the region. The findings provide valuable intuitions for policymakers, business support organizations, and SME practitioners, enabling them to design targeted interventions and capacity-building initiatives to enhance entrepreneurship competencies and promote sustainable business growth in South-West Nigeria.

Keywords: Training and Development, Technology Utilization Competency, Financial Management Competency, Operational Cost Efficiency

First Plenary Session / **168**

Building an Ideal Islamic Personality in the Contemporary Multi-Religious Societies: South-Western Nigeria in Focus

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Abstract

Religious diversity often questions the tolerance of adherents in societies variegated with spontaneous ethnical and political conflicts in the contemporary time. Thus, the article seeks to identify the internal Islamic mechanism to fortify tolerance in today's religious diverseness which has challenged forbearance and peaceful coexistence in the south-western Nigerian communities by building the ideal Islamic personality to foster understanding and togetherness regardless of the creedal differences and cultural divergence. Religious diversity has remain the main catalyst of religious intolerance which further creates disunity that accounts for the withering state in the overall togetherness of the Yorùbá community of the south-western Nigeria. Through analytical and descriptive methods, the article examines critically the levels of religious models preached by Muslim scholars to integrate social balance and also observe factors that impede tolerance in the Yorùbá society. Substantively however, the study suggests that the Madīnian system of interaction and dialogue with non-Muslims provides a baseline for religious tolerance and peaceful coexistence that promotes social growth and productivity in the South-Western states.

Keywords: Religious diversity, tolerance, conflicts, contemporary time, peaceful coexistence, Yorùbá society, Southwestern Nigeria.

First Plenary Session / **74**

Determinants of Under-utilized Edible-Insect Commercialization in North-Central, Nigeria

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Abstract
Formulating sound policies on harnessing the full potentials of under-utilised edible insects requires a deep knowledge of their current commercialization level and its drivers. The objective of this study is therefore to bring to lime-light the determinants of Edible insects commercialization. The study was carried out in Benue State due to its high involvement in edible insect commercialization. A cross sectional survey using three-stage sampling procedure was used to retrieve data from 200 rural households that were involved in the commercialization of under-utilised edible insects in the State. Descriptive statistics, Household commercialization index and the Tobit regression analytical tools were adopted for this study. The study revealed that cricket, termite, caterpillar, grasshopper and palm weevil were the edible insect species that are popularly commercialized in the study area. The prime drivers of commercialization of under-utilised edible insects were gender (0.07; p = 0.1), marital status (0.12; p = 0.05), years of schooling of the household head (-0.10; p = 0.1), annual income (6.93; p = 0.01) and household size (-0.83; p = 0.01) (Values in parenthesis are the coefficients and the significance levels respectively). It is recommended that government and other interested bodies should re-orientate rural households on the benefits that can be derived from this enterprise to further promote the concept of commercialization of under-utilised edible insects.
Keywords: Commercialization; edible-insect; determinants; Tobit regression; under-utilized.

First Plenary Session / **27**

Optimization of the Leaching Kinetics for Uranium Recovery from a Boltwoodite Ore as Emerging Solution to Nigerian Power Sector

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Abstract
The continuous rise of the population cum standard of living has resulted in Nigerians sourcing for a profound solution to the fast-growing demand for electrical energy with sustainability concerns including greenhouse gas emissions limitation. Thus, the processing of an indigenous boltwoodite ore containing admixtures of albite (Na2.00Al2.00Si6.00O16.00), boltwoodite (Na2.00K2.77U3.00Si6.00O9.00H4.00), thorite (Th4.00Si4.00O16.00), and quartz (Si6.00O6.00) by the hydrometallurgical process was examined in sulphuric acid media. In this study, the influence of sulphuric acid concentration, reaction temperature, solid-to-liquid ratio, and leaching time on the extent of uranium ore dissolution were investigated. At established experimental conditions (2.5 mol/L H2SO4, 75 ℃, 75 μm), the uranium ore dissolution rate recorded was 89.1% within 120 minutes. The calculated activation energy (Ea) of 20.70 kJ/mol, supported the proposed diffusion-controlled reaction mechanism; and the thermodynamic test was examined to explore dissolution feasibility. Hence, the pure uranyl solution obtained was further beneficiated to high-grade ammonium diuranate [(NH4)2U2O7] comparable with the international standard of nuclear purity ASTM C 788-03; recommended to serve as a mediator for nuclear fuel cycle application.

Keywords: Optimization; Kinetics; Thermodynamics; Emerging Solution; Uranium recovery.

First Plenary Session / 257

Virtual Reality, Learning and Health Education: Do Cognitive Differences Matter?

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Abstract:

Virtual reality (VR) is increasingly recognized for its effectiveness in the conveyance of new knowledge and behaviour modification in people. There is evidence in the literature about the technology' s role in transforming treatment and improving mental, physical and psychosocial health outcomes. VR can communicate health information to patients more effectively helping to improve knowledge, reduce anxiety and improve outcomes. Despite these capabilities and their implications for delivering highly desirable solutions in healthcare, the outcomes of these solutions may be undermined by cognitive differences in patients. Therefore, this paper examined the role of virtual reality in learning and health education while focusing on the importance of considering cognitive problems in the design, development, or use of VR solutions. The paper showed that virtual reality users differ in cognitive abilities (such as reaction time, mental processing, and spatial recognition), which can alter the outcome of virtual reality solutions. Further, not paying attention to the differences in the cognition of VR users can not only hinder the outcome of VR solutions but also alter the well-being of users. Hence, the paper recommends that considerable attention must be paid to the design and development of virtual reality solutions.

Keywords: Virtual Reality, Health Education, Learning, Cognitive differences, Health Outcomes

First Plenary Session / 47

Vegetable Protein: A Viable Means of Combating Protein-Energy Undernutrition

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Abstract

Protein-energy undernutrition (PEU), also called protein-energy malnutrition (PEM), is a perennial challenge with life-threatening consequences worldwide, especially in low-income countries. The African continent is worst hit, with continuous increase in cases. PEU is a condition that arises from the deficiency of all macronutrients, but primarily protein. It has numerous health implications such as atrophy, reduced muscle mass, impaired wound healing, skin thinning, immune deficiency, fatigue, apathy, hypothermia etc. Marasmus, kwashiorkor and marasmus-kwashiorkor are forms of PEU. A major cause of PEU is the high cost of protein-rich foods, especially those of animal sources. Consequently, little or no protein is included in the diet of low-income earners. This is more so because of the general preference for animal protein. This review highlighted the various protein-rich foods of plant sources with a view to shifting focus from animals for human protein needs, especially in low-income countries. The review showed that the plant kingdom is replete

with protein-rich foods of good quality such as legumes, lentils, nuts, green peas etc. These plant-based proteins, also known as vegetable proteins, are generally cheap and accessible. They are also devoid of maladies, which may sometimes be associated with foods of animal sources. In conclusion, vegetable proteins are safer, healthier for consumption, and have the potential of solving the global PEU challenge, and equally achieving zero hunger, as well as good health and well-being, which are part of the sustainable development goals (SDGs). The review recommends a shift in focus from animal proteins to vegetable proteins, especially in low-income countries.

Keywords: Vegetable protein, Protein-energy undernutrition (PEU), Protein-energy malnutrition (PEM), Sustainable Development Goals (SDGs), Good health, well-being

First Plenary Session / **9**

Digital Health and Technology in Medicine

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Abstract

Digital health and technology have revolutionized the landscape of modern medicine, offering innovative solutions to enhance patient care, improve healthcare delivery, and advance medical research. Telemedicine has emerged as a vital tool, enabling healthcare professionals to provide remote consultations, diagnosis, and treatment to patients regardless of geographical barriers. Through video conferencing, secure messaging platforms, and mobile applications, patients can access medical advice and monitoring from the comfort of their homes. Remote patient monitoring devices, such as wearable sensors and smart health trackers, enable continuous data collection of vital signs, medication adherence, and disease progression. The adoption of Electronic Health Records (EHRs) has transformed medical documentation and information sharing within healthcare systems. EHRs centralize patient data, including medical history, test results, prescriptions, and treatment plans, facilitating comprehensive and coordinated care. Interoperability of EHR systems allows seamless exchange of health information between different healthcare providers, improving care continuity, reducing duplication of tests, and enhancing patient safety. Furthermore, patient portals integrated with EHRs empower individuals to access their medical records, schedule appointments, and communicate with their healthcare team, promoting patient engagement and shared decision-making. Artificial Intelligence (AI) and machine learning algorithms are reshaping diagnostics, treatment planning, and medical research. AI-powered diagnostic tools, such as image recognition software and predictive analytics, aid in the early detection of diseases, interpretation of medical imaging scans, and identification of patterns in patient data. These technologies enable faster and more accurate diagnoses, leading to timely interventions and improved patient outcomes. The proliferation of health apps and wearable devices has empowered individuals to take control of their Health and wellness

KEY WORDS: Digital, Health, Technology and Medicine

First Plenary Session / **162**

Navigating Global Energy Demand and Supply: Renewable Energy Resources as Alternative to Mitigate the Energy Crisis of Sub-Saharan Africa by

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Abstract

The paper highlights the potentials in renewable energy sources as credible alternative to the non-renewable energy sources of the global energy concerns, particularly as it affects the sub- Saharan Africa. The ever- increasing energy needs and dwindling reserves of the world have spurred efforts to enlighten the populace on energy availability, need and how to harness the various forms it existed for the good of mankind. The pressure of demand and supply of energy and the energy crises are discussed. The slow pace of development in sub- Saharan Africa and other developing nations are attributable mainly to paucity of energy supply as highlighted. For instance, the instability in electricity supply is a consequence of energy insufficiency and poor management of the available ones. Demerits of non-renewable sources of energy are projected emphasizing their damaging effects on the environment and the exhaustible quantity. It is recalled that most of the non-renewable energy sources are derived from fossil fuels (coal, crude oil, liquified petroleum gas and compressed natural gas) and radioactive elements (such as natural uranium). Incidentally, the non- renewable energy sources constitute the world's greatest energy supply today. Spotlight is beamed on renewable energy technologies that can be transformed into usable forms and veritable alternatives. The renewable energy sources being considered include water (hydro), wind, sunlight, geothermal, biomass, sea waves and ocean tides. Reasons for intense advocacy to switch over to renewable sources of energy are brought to limelight. Recommendations are made on how to mitigate the energy problem.

Keywords: Global energy demand and supply, renewable energy resources, non-renewable energy resources, energy crisis, sub- Saharan Africa

First Plenary Session / **165**

Educational Development and Counselling Effectiveness through Innovative Applications of Artificial Intelligence for Sustainability

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Abstract

In recent years, Artificial Intelligence (AI) has increasingly been explored for its potential to revolutionize education and counselling practices, and contributing to sustainable development'goals. This paper examined how innovative applications of AI can enhance educational development and counselling effectiveness while promoting sustainability in the education sector. By leveraging AI technologies such as machine learning, natural language processing, and personalized recommendation systems, educational institutions and counsellors can tailor learning experiences and support services to meet the diverse needs of students while minimizing resource use and environmental impact. This paper adopted professional counselling psychologists in Kwara State at its population. A multi-stage random sampling technique was used to select 150 counselling psychologists from six randomly selected local government areas in Kwara State. A self-developed but carefully validated instrument tagged Educational Development, Counselling Effectiveness and Artificial Intelligence

(EDCEAI) was used to collect the data. Four hypotheses were raised and tested in the this study. Pearson Product Moment Correlation and Multiple Regression Analysis were used to analyse the generated data. Results indicated that all the four null hypotheses of the study were rejected. The findings were discussed and recommendations based on the findings of the study were highlighted. The study concluded that the integration of AI in education and counselling enables data-driven decision-making, early intervention, and continuous improvement in learning outcomes and student well-being.

Keywords; Educational development, counselling effectiveness, innovative use of artificial intelligence, sustainability

First Plenary Session / **133**

Transgenerational Epigenetics Research: Lessons From Drosophila Melanogaster

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Abstract

Transgenerational epigenetic inheritance has emerged as an interesting area of research, shedding light on how environmental exposures can influence phenotypic traits across multiple generations via epigenetic mechanisms. Drosophila melanogaster (fruit flies), a widely utilized model organism in genetics and developmental biology, has served as a powerful model organism in this field due to its short life cycle, robust genetic tools, and established methods for studying epigenetic modifications. This review aims to provide an overview of transgenerational epigenetic research, focusing on key mechanisms and insights gained from Drosophila studies. We delve into the mechanisms underlying transgenerational epigenetic inheritance, including DNA methylation, histone modifications, and non-coding RNA-mediated processes. Experimental approaches employed in Drosophila research are discussed, emphasizing the strengths and limitations of using this model organism for studying epigenetic inheritance. Through a series of findings from Drosophila research, we explore the environmental influences on epigenetic marks across generations. These insights offer valuable lessons that can inform our understanding of human health, disease susceptibility, and the broader implications of transgenerational epigenetic changes. Despite advancements, there are still challenges in elucidating the complexities of transgenerational epigenetic inheritance. This review also discusses future directions and the importance of interdisciplinary collaborations to further our knowledge in this rapidly evolving field. In summary, we highlight the pivotal role of Drosophila in advancing transgenerational epigenetic research and the broader implications of these findings for epigenetic inheritance in complex organisms, including humans.

Keywords: Transgenerational epigenetics, Drosophila melanogaster, Epigenetic inheritance, DNA methylation, Histone modifications, Non-coding RNAs.

First Plenary Session / **235**

Digital Peacebuilding Initiatives: Exploring the Impact and its Sustainability

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Abstract:

Digital technologies are increasingly recognized as tools for peacebuilding initiatives, offering innovative approaches to fostering dialogue, reconciliation, and conflict resolution in diverse contexts. This paper critically examines the impact and sustainability of digital peacebuilding initiatives, exploring their effectiveness in promoting peace and stability in conflict-affected societies. Drawing on a comprehensive review of existing literature and case studies from around the world, the study assesses the strengths, limitations, and long-term implications of various digital peacebuilding interventions.

The analysis begins by exploring the landscape of digital peacebuilding initiatives, including online dialogue platforms, peacebuilding apps, and digital storytelling projects. Through in-depth case studies and comparative analysis, the research evaluates the impact of these initiatives on conflict dynamics, community resilience, and peacebuilding outcomes. It examines how digital platforms empower individuals and communities to participate in peacebuilding processes, amplify marginalized voices, and bridge divides in polarized societies.

Furthermore, the article investigates the sustainability of digital peacebuilding initiatives, considering factors such as funding mechanisms, technological infrastructure, and local ownership. By assessing the scalability, adaptability, and institutional support of digital peacebuilding interventions, the research seeks to identify best practices and lessons learned for maximizing their long-term impact and effectiveness. It also examines challenges related to digital literacy, data security, and ethical considerations in the design and implementation of digital peacebuilding initiatives.

Overall, this research contributes to a deeper understanding of the role of digital technologies in peacebuilding efforts and provides insights for policymakers, practitioners, and academics seeking to harness the potential of digital platforms for conflict resolution and sustainable peace.

Keywords: Digital peacebuilding, Conflict resolution, Sustainability, Digital literacy

First Plenary Session / 279

Using Structural Equation Modeling to Examine the Impact of Innovative Teaching Practices on the Sustainability of Students' Engagement

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Abstract:

Innovative teaching, regardless of the discipline, brings about interest and motivation to students, which eventually leads to learning. Thus, the study examined Structural Equation Modeling to examine the impact of innovative teaching practices on the sustainability of students'engagement. The study adopted quantitative research approach to obtained relevant information from the respondents. Proportionate random sampling technique was used to select 342 teachers. Six instruments were formulated tagged flipped classroom (FCQ); google classroom-assisted learning (GCALQ); design-thinking process (DTPQ); project-based learning (PBLQ) and blended learning (BLQ). The instruments were subjected to reliability test using SPSS version 21 where reliability coefficient indicated at .745, .827, .889, .901 and 870. Structural Equation Modeling (SEM) was used to analyzed

the hypotheses formulated. The findings revealed that flipped classroom had significant relationship with students'engagement where standardized regression weight indicated β=.803 and significant at p<0.05. The finding further found that google classroom-assisted learning had significant relationship with students'engagement with standardized regression weight of β=.881 and significant at p<0.05. Also, the finding revealed that design-thinking process, project-based learning and blended learning had significant relationship with students'engagement where standardized regression weight were β=0.903, p<0.005, β=0.704, p<0.005 and β=0.658, p<0.005. The findings concluded that innovative teaching practices enhanced students'engagement and learning. In line with the findings of the study, it was recommended that the teachers should continuously integrate innovative teaching practices in to classroom activity so that students'engagement are accomplished.

Keywords: Flipped Classroom, Google Classroom-Assisted Learning, Design-Thinking Process, Project-Based Learning and Blended Learning

First Plenary Session / 92

Smallholder Farmers'Attitude on the System of Rice Intensification Innovation Practices in North West, Nigeria

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Abstract

Production of rice is of pivotal focus in Nigeria due to its impact on smallholders'income, livelihood and food security. Flooded rice is the largest consumer of water, and its sustainability is endangered by water inadequacy. This has compelled the development of substitute irrigation innovation, like the system of rice intensification (SRI), which are effective in water use with improved yields. The study examined the smallholder farmers'awareness and attitude on the system of rice intensification innovation practices in North-west, Nigeria. Data were collected using structured questionnaire and interview schedule administered to randomly selected 315 rice farmers via a 3-stage sampling procedure. Data were analyzed using descriptive statistics. Majority are males (91.7%), married (75.0%), with secondary education (66.7%) and no extension contact (91.7%). Average age of 32 years, farming experience of 11 years, monthly income of N30, 637.51k, farm size of 7.0 hectares and household size of 5 persons. The respondents have favorable attitude towards SRI innovation practices ($\bar{x}$=1.54±1.23). The categorization of attitude shows that majority (58.7%) were with favorable attitude. Greater proportion indicated low awareness level (65.3%) on SRI innovation practices ($\bar{x}$=2.37±1.54). There are several severe constraints to implementation of SRI practices with constraint index of $\bar{x}$=3.21±1.47. The study recommends that awareness campaign on SRI practices be instituted using different information dissemination methods. Periodic advisory services be provided to increase the attitude, understanding and awareness of the clienteles on the SRI components as well as boosting the adoption to strengthened food security.

Keywords: Farmers, Rice-Intensification, Smallholder, Awareness, Attitude, Practices

First Plenary Session / 18

Human Resources Skills in Business Education Programme for Youth Empowerment and National Development in Nigeria

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Abstract

This study examined human resources skills in Business Education programme for youth empowerment and national development in Nigeria. Two (2) research questions guided the study. The study adopted descriptive survey design. A total of 120 Business Educators in Oyo State tertiary institutions offering Business Education formed the population for this study and the entire population was studied, this is owing to the small number of the subject involved in the study. Twenty (20) items structured questionnaire validated by three (3) experts was used for data collection. The pilot study conducted yielded reliability co-efficient of 0.87 using Cronbach alpha which was high enough for the instrument to be considered reliable. Mean and standard deviation were used to analyze the research questions. The findings revealed among others thattraining and retraining of business youths, acquisition of practical skills to reduce unemployment rate, introduction of technological tools, mentoring of employees promoting business plan by employees and development of entrepreneur internship programme are the strategies for developing human resources skills in Business Education programme for youth empowerment and national development in Nigeria. It wasrecommended among others there should be training and retraining for Business Educators so as to develop students practically rather than the theoretical aspects of Business Education programme.

Keywords:

First Plenary Session / 6

International Public Sector Accounting Standards (Ipsas) Implementation And Financial Reporting: Issues And Challenges In Kwara North, Nigeria

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Abstract

The implementation of International Public Sector Accounting Standards (IPSAS) represents a significant shift towards transparency, accountability, and comparability in financial reporting within the public sector globally. However, the adoption and adherence to IPSAS pose numerous challenges, especially in developing regions like Kwara North. This paper examines the issues and challenges associated with IPSAS implementation and financial reporting within Kwara North, Nigeria. The population of the study consists of accountants, auditors, and cash officers in in local governments, and agencies in Baruten, Edu, Kaiama, Moro, and Patigi Local Government Area of Kwara State, while the sample size consisted of 150 financial team selected from 5 local governments within Kwara North using the stratified sampling technique. The Analysis of Variance (ANOVA) was used for the hypothesis test. The results showed that the key issues hindering effective IPSAS implementation

and financial reporting in Kwara North include; lack of awareness of IPSAS requirements or the importance of standardized financial reporting, limited financial resources and capacity to implement IPSAS, political interference where many local government officials face pressure to manipulate financial data for political gain, undermining the integrity of IPSAS implementation, and inadequate infrastructure and technological constraints, such as unreliable internet connectivity and outdated software systems, also hinder the adoption of IPSAS-compliant accounting practices.
Keywords: IPSAS, Financial Reporting, Challenges, Implementation, Kwara North.

First Plenary Session / **3**

Academic Entrepreneurship: Unlocking Alternative Funding for Universities

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Abstract

Academic entrepreneurship has become an increasingly important topic in universities as they seek alternative funding sources. This phenomenon involves the collaboration between academia and industry, where universities use their resources and knowledge to create commercial ventures. By doing so, they not only generate revenue, but also contribute to the growth of the economy. This study analyzes the key factors that contribute to the success of academic entrepreneurship in universities and identified three main drivers: strong university-industry partnerships, proactive universities, and supportive policies. The findings of this study suggest that through the combination of these drivers, universities can successfully unlock alternative funding through academic entrepreneurship. By embracing this trend, they can not only increase their revenue streams, but also contribute to the growth and innovation of their respective industries.

Keywords: Academic Entrepreneurship, Internal Revenue Generation, University Funding

First Plenary Session / **161**

Exploring Collaborative Curriculum Development Implementation in Nigerian Universities for Sustainable Entrepreneurship and Employability.

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Abstract

Employers of Nigerian university graduates and entrepreneurship research have observed the discrepancies between Nigerian graduates'summative academic/professional qualifications arising from the curricula of different academic programmes in Nigerian universities and the rapidly changing requisites of work in industries and related service providing sector of the Nigerian society or the world of works in the contemporary global society. Some evaluators of the undergraduates'curricula have also raised the issue of low entrepreneurial capacity and employability of the graduates. The paper, based on Stakes'(1967) antecedents, Transactions and Outcomes model of curriculum evaluation, and Davis (1989) Technology Acceptance model highlights the increasing tendency for the observed knowledge and skills gabs to continue among graduates from the Nigerian undergraduate

curricula if the existing centralized curriculum development practice in Nigerian universities is not amended. The paper explores the need for the use of collaborative curriculum development and implementation between the universities and experts from industries and other service providers to address the knowledge and skill gabs in the existing undergraduate curricula. The paper further highlights specific areas, modalities and gains of collaborative curriculum development and implementation as a panacea for addressing the graduates'entrepreneurial capacity and employability challenge arising from the knowledge and skill gaps. The paper finally recommends the implementation of the remediation measure through annual needs analysis of industries and other service providers; part-time practical teaching experience hours; short-term course specific internship; service learning; and work-study programme in penultimate graduating year in industries and other service providing organizations in Nigeria.

Keywords: Collaborative Curriculum Development, Curriculum Implementation, Entrepreneurial Capacity and Employability.

First Plenary Session / **412**

HISTORICAL ANALYSIS OF GENDER AND EDUCATION IN NIGERIA: FROM COLONIALISM TO POST-COLONIALISM

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Abstract
This study provides a comprehensive historical analysis of gender and education in Nigeria, tracing the evolution from the colonial era to the post-colonial period. The research delves into the socio-political and economic factors that shaped educational policies and practices, and their impacts on gender equality in education. During the colonial period, Western education was introduced, but access was highly gendered, with boys receiving preferential treatment due to prevailing patriarchal norms. Girls' education was often limited to domestic training, reinforcing traditional gender roles. In the post-colonial era, Nigeria witnessed significant policy shifts aimed at redressing gender imbalances in education. The establishment of universal primary education and various educational reforms sought to increase female enrollment and retention rates. Despite these efforts, socio-cultural barriers, economic challenges, and inadequate infrastructure continued to hinder gender parity. The study utilizes a multi-disciplinary approach, incorporating perspectives from sociology, gender studies, and educational policy analysis to explore how historical legacies influence contemporary educational outcomes. By assessing the key legislative acts, educational policies, and statistical data, the research highlights the progress made and the persistent challenges in achieving gender equity in education. The analysis reveals that while substantial gains have been made in female education, deep-seated cultural attitudes and economic disparities remain significant obstacles. The study underscores the need for a sustained and holistic approach to policy implementation, community engagement, and socio-economic support to achieve true gender equality in education. This historical analysis not only enriches the understanding of gender dynamics in Nigerian education but also offers valuable insights for policymakers, educators, and researchers working towards inclusive and equitable educational systems. The findings suggest that addressing gender inequality in education requires a concerted effort that transcends policy formulations, demanding active participation from all societal sectors to foster an environment where both boys and girls can equally thrive and contribute to national development
Keywords: Gender, Colonialism, Post-Colonialism, Education, Policies

First Plenary Session / **28**

Soybean Virus Infection: An Impingement on Food Security in Baruten Local Government Area of Kwara State–Nigeria

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Abstract

Food security is under-challenged due to increasing human population, limited cropland, plant pathogens and climate change. Soybean exemplifies the most significantly cultivated food legume worldwide. It plays a significant role in food security as well as agricultural sustainability due to its nutritive value and is often touted as a potential weapon against hunger. Viral soybean diseases are a serious threat to soybean production impacting growth and yields. The federal government of Nigeria recently commissioned a 1.8 million cubic metres storage capacity in Baruten Local Government Area to feed at least 100 hectares of irrigation farmlands. A study was therefore designed to assess the disease incidence and severity of the viruses infecting varieties of soybean cultivated in Baruten Local Government Area of Kwara State. The survey for the incidence and severity of viruses infecting soybean was conducted at 30 locations on farms within Baruten Local Government Area where soybean is predominantly grown. Disease incidence was determined based on the number of diseased plants relative to the total number of plants assessed and an index scale was developed to score disease severity. Virus incidence ranged from 38.1% (Ningurume) to 57.9% (Okuta). The severity index of infection alternated from 3 in Boriya to 5 in Bwereguru. The study establishes high susceptibility to virus infection of soybean varieties in Baruten LGA. There is need for provision to the farmers of improved soybean varieties for the assurance of food security in Baruten LGA highly touted as the food basket of Kwara State
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Keywords:

First Plenary Session / 35

One Health as Cornerstone for Rabies Control and Prevention

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Background:

Rabies is a disease caused by rabies virus, affecting the central nervous system and spinal cord of infected animals, leading to encephalomyelitis and death. Rabies is under-reported and a serious public health hazard in Nigeria, where dog bite is the major transmitter to human. Rabies has been successfully controlled in most developed countries, where mass vaccination of dogs and various One-Health approaches were employed which embraces a broad-based strategy for managing infectious diseases through multi-disciplinary communication and collaboration with optimal environmental, human and animal health outcome at local, national and global levels. The inability to vaccinate 80% of dog population due to human and environmental factors has led to increased rabies related human death in Nigeria, resulting from dog bites, with attendant socioeconomic and public health impact.
Methods: The research design used was retrospective analyses of randomly selected veterinary and

medical records of patients. Data collected were analysed using SPSS version 20. One health strategy was also used to highlight how integration and collaboration among stakeholders could result in effective prevention and control of rabies in Nigeria.
Results: The investigation revealed prompt cross fertilization of ideas and exchange of information among stakeholders. The study indicated that only the essential pre and post exposure prophylaxis were administered thereby reducing unnecessary economic burden.
Conclusion: We highlighted the challenges of rabies in Nigeria, strategies adopted and steps taken in line with one health approach in solving the problem for effective and efficient management.

Keywords;

First Plenary Session / **37**

Use of Corporate Community Involvement (Cci) by Thomas Adewumi University in Fostering Cordial Relationship among Dwellers of Oko Community

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Abstract

The goal of every organisation is aimed at achieving good reputation, image, growth, increase in turn over, assets and ultimately makes profit. Achieving these goals depend solely on the organization' s goodwill and ability to carry along its stakeholders. Corporate Community Involvement (CCI) is one of the potent tools which corporate organizations use from time to time to maintain cordial relationship with people in its host environment. As a result, this study assessed the use of CCI by Thomas Adewumi University in fostering cordial relationship among dwellers of Oko community which hosts the institution. Resting on the Stakeholders'and Excellence theories of public relations, a qualitative research design through in-depth interview method was employed to elicit information from selected dwellers of Oko community. Moreover, the interview responses were thematically analysed using the NVivo software. The study found that there abounds various CCI programmes initiated by Thomas Adewumi University which includes: Philanthropy, developmental projects, town hall meeting, participation in festivals, employment opportunities, scholarships and so on. Also, it was found that dwellers of Oko community lacks knowledge and awareness of the institution' s CCI programmes, hence, they see every CCI activities as a kind of freebies.
Thus, it was concluded that stakeholders'engagements/relations is key to the success and growth of every tertiary institution. The study therefore recommended the need for authorities of Thomas Adewumi University to priortise other aspects of corporate social responsibilities, aside from CCI, and to inculcate representatives of Oko community into its governing council in order to give them a sense of belonging as regards the affairs of the institution.

Keywords:

First Plenary Session / **431**

Navigating Through Business Ethics in Islam And Other Religions: A Panacea To Nigeria's Current Economic Challenges

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ABSTRACT

This paper explores the potential of business ethics rooted in Islamic principles and those of other major religions as a remedy for Nigeria's ongoing economic difficulties. It delves into the ethical frameworks provided by Islam, Christianity, and traditional African religions, examining how these can guide business practices toward greater integrity, fairness, and social responsibility. The study emphasizes the importance of ethical conduct in fostering trust, reducing corruption, and enhancing economic stability. By highlighting successful case studies and historical examples, the paper illustrates how adherence to religiously inspired ethical standards can lead to sustainable economic development. Ultimately, the paper argues that integrating these ethical principles into Nigeria's business environment could serve as a powerful catalyst for overcoming the nation's economic challenges and achieving long-term prosperity. In particular, the research analyzes the practical applications of these religious principles in business contexts, showing how they can be implemented effectively. For instance, Islamic business ethics emphasize the prohibition of dishonest gain and the promotion of equitable wealth distribution, while Christian ethics stress the importance of honesty, stewardship, and compassion in business dealings. Traditional African religions often highlight communal well-being and accountability. Through these lenses, the paper presents a comprehensive view of how such ethical frameworks can be woven into the fabric of Nigerian business practices. By doing so, the study provides a compelling argument that ethical business practices rooted in religious values are not only morally sound but also economically beneficial, paving the way for a more prosperous and just society.

Keywords: Business Ethics, Islamic Principles, Economic development, Ethical conduct, Nigeria

First Plenary Session / **43**

Effectiveness of Video-Mediated and Computer-Based Instructional Strategies on Secondary School Students Learning Outcomes in Economics in Ilorin Metropolis

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Abstract

This study examined the effectiveness of video-mediated and computer-based instruction on secondary school students'learning outcomes in Economics in Ilorin metropolis and also established the relative effectiveness of the instructional strategies in improving students'attitude towards Economics. The study adopted the non-equivalent pretest-posttest control group design. The population comprised all Secondary School students offering Economics in Ilorin metropolis. Simple random sampling technique was used to select three SS II classes from three secondary schools within the metropolis and a total of 151 students in intact classes participated in the study. Students were randomly assigned to group A, B and C with A and B as experimental groups (Video-mediated instruction and Computer-based Instruction) while C served as the control group (Computer-based Instruction) and were given the same instruction. Economics Achievement Test (EAT) and Economics Attitudinal Scale (EAS) were used as research instruments. The data were analysed using Analysis of Co-variance (ANCOVA) and Tukey's pair-wise test was used for post-hoc analysis. The

findings showed that video-mediated and computer-based instruction significantly improved students'performance in Economics (F = 25.393; p < 0.05) but the VMI performed significantly better than CBI (= 24.5 and 23.4). The results also showed that video-mediated and computer-based instruction significantly improved students'attitude in Economics (F = 3.169; p < 0.05) and that there was higher positive attitude towards Economics in CBI than VMI group (= 83.2 and 79.4). The study concluded that the VMI was a better strategy than the CBI in improving students'learning outcomes in Economics.

Keywords:

First Plenary Session / **33**

Effect of Computer Based-Test on the Reduction of Greenhouse Gases

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ABSTRACT

The study assessed the effect of Computer Based Test on afforestation and the reduction of greenhouse gases, taking a case study of Joint Admission Matriculation Board, (JAMB). The stated objectives were to: examine the role of paper usage in environmental degradation by estimating the amount of carbon generated per ton of paper produced and how the adoption of Computer Based Test (CBT) has helped to reduce the amount of greenhouse gases in the atmosphere. Data was collected from JAMB to estimate the number of students who sat for Post UTME between 2014 and 2023. The results of the findings shows that the use of Computer Based Test for JAMB UTME examination in 2014 and 2023 conserved about 66,750,168sheets of paper (equivalence of 8,010.75 trees) and keep back the release of over 825,107.25kg of carbon in nine years. The study concludes that computer-based test is a positive development to the education system and to environmental sustainability and recommends that institutions should adopt the technology of Computer Based Test to reduce paper usage as well as the emission of greenhouse gases.

Keywords:

First Plenary Session / **32**

Factors Influencing the Adoption of Digital Currency in Nigeria

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ABSTRACT

The broad objective of this study is to examine the factors influencing the adoption of digital currency in Nigeria. The objective of the study was to explore the significant factors that might facilitate

the adoption of digital currencies. The quantitative approach using descriptive research design was used for the study. The population of the study involved Nigeria residents across six (6) geo-political zones in Nigeria. The sample size for the study was 380 respondents based on Krejcie and Morgan table for determining sample size. Data was obtained through an online-administered questionnaire (Google forms) and paper-based questionnaire which was sent and distributed to respondents through social media, emails as well as personal distribution. The data gathered was analyzed using descriptive statistics, percentage, ordinary lest square, ANOVA and coefficients. The results of the study indicated that user experience, social, technological and economic factors influence adoption of digital currency whereas market, regulatory and environmental factors do not influence adoption of digital currency. Thus, the study concludes that there are significant factors influencing digital currency adoption in Nigeria. The study recommends that banking industry, fintech's, companies as well as other organizations should adopt the use of digital currency as transaction and payment system. Also, government should provide and promote awareness, knowledge and understanding for people to access and use digital currencies.

Keyword:

First Plenary Session / **59**

Financial Inclusion, Gender Inclusion and Digital Inclusion: Imperatives for Sustainable Development

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Abstract

This paper aims to analyze the effects and causal relationship of financial, gender and digital inclusion towards the attainment of sustainable development in 36 sub-Sahara African countries between 2004 and 2021. Theoretically, the study is anchored on the neoclassical economic growth theory, growth accounting framework and the role of savings in capital accumulation. Sustainable development, which is the dependent variable, is proxied with adjusted net savings and regressed on financial inclusion (broad money supply, commercial bank branches and domestic credit to private sector), gender inclusion (percentage of female employment, female labour force participation, and female in parliament), digital inclusion (mobile phone subscription and internet usage), and control variables (natural resource rent and gross domestic product). All data are sourced from the World Bank's WDI online database and will be analyzed using the Generalized Method of Moments (GMM) and Granger Causality test. This study will contribute to knowledge by conducting an empirical tripartite analysis of different dimensions of inclusion which will bring to the fore, the interrelationships among the variables to gain a holistic perspective for the design and implementation of policy-relevant inclusive interventions. Secondly, the causal analysis will expose the direction of the relationship which will guide policymakers and other relevant stakeholders in prioritizing inclusion strategies so as to maximize direct benefits and spillover effects.

Keywords: Financial inclusion, gender inclusion, digital inclusion, sustainable development, Sub-Sahara Africa

First Plenary Session / **60**

Assessing the Perception of Academic and Non-Academic Staff on the Contribution of Industries to Student Support Services in

Al-Hikmah University, Nigeria: A Qualitative Approach

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Abstract

This qualitative study explores the perceptions of academic and non-academic staff regarding the contribution of industries to student support services in Al-Hikmah University, Nigeria. The research aims to understand how industries are perceived to support students beyond the academic realm, including career development, mentorship, internships, and other forms of support. Semi-structured interviews were conducted with 20 participants, comprising academic and non-academic staff members. Thematic analysis revealed several key themes, including the perceived benefits of industry collaboration, challenges faced in implementing industry-supported programs, and suggestions for improving industry-student engagement. The findings suggest that while there is a general appreciation for the contributions of industries to student support services, there are also areas that require improvement, such as communication between industries and the university, and the need for more tailored support programs. These findings have implications for enhancing industry-student partnerships and improving the overall student experience at Al-Hikmah University.

Keywords:

First Plenary Session / **157**

Information Sharing Strategy and Performance of University Academic Staff in The South-West of Nigeria

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Abstract

The academic environment in Nigeria, particularly within the South-West region, is undergoing significant transformations driven by technological advancements, globalization, and the increasing demand for high-quality education. In this dynamic environment, the performance of academic staff plays a critical role in the overall success of universities. Despite the importance of information sharing, there is a notable gap in understanding how this strategy influence the performance of Nigerian universities, particularly within the context of the South-West region. Therefore, this study examines information sharing strategy and performance of academic staff in universities within the South-West region of Nigeria. 900 sample size was drawn from a total population of 12,844 academic staff members of Public Universities in the South-West, Nigeria, using stratified random sampling method. The data were analysed using multiple regression analysis. Findings indicated that constructs of information sharing have positive and significant effect on academic staff performance, such as research output, teaching quality, and institutional contribution. The findings provide valuable insights for university management and policymakers seeking to enhance information sharing processes in order to improve the performance of academic staff.

Keywords: Information Sharing Strategy, Academic Staff Performance, Knowledge Transfer, Quality of Information Shared, Research Productivity, Interdisciplinary Research Initiatives.

First Plenary Session / 50

Effect Of Nitrogen Source Of Fertilizers On Growth And Yield Of Okra (Abelmoschus Esculentus L.)

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Abstract

Fertilizers provide essential nutrients that plants require for their growth and development. A pot trial was conducted in the screen-house of Kwara State University, Malete, to investigate the effect of nitrogen source of fertilizers on the growth and yield of Okra (Abelmoschus esculentus L.). The treatments comprises; control, poultry manure, prilled urea, neem coated urea and NPK fertilizer each replicated three times and fitted into a completely randomized design (CRD). Agronomic parameters taken were; plant height, stem girth, number of leaves, number of branches, days to 50% flowering, number of fruits/plants, and fruit weight/plant. Data collected were subjected to analysis of variance and significant differences among the treatment means were evaluated using Duncan' s Multiple Range Test (DMRT) at 5 % probability level. The results of this investigation reveal that the application of nitrogen based fertilizers significantly ($p< 0.05$) increased the growth and yield parameters of the Okra plants when compared with control.
Poultry manure significantly ($P<0.05$) improved the yield of okra by 18% and 56% compared with NPK fertilizer and control respectively. Poultry manure had a significant and additive effect on soil nutrients after harvesting of okra when compared with NPK and other treatments after cropping. This suggests that poultry manure have a high potential than NPK and urea for building up nutrients in the soil with time. Therefore, Poultry manure could serve as alternative to organic fertilizer for the production of okra.

Keywords: Growth; okra; poultry manure; urea; yield

First Plenary Session / 187

Impact Of Forex Volatility On The Financial Performance Of Listed Consumer Good Firms In Nigeria.

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Abstract
The forex volatility that greeted the 2023 general election and its exacerbation afterwards is a source of serious concern amongst consumer goods producers wherein unprecedented losses have been filed by major stock market participants and manufacturers in Nigeria. Further to that, this study intends to examine the effect of forex volatility on the financial performance of consumer goods firms in Nigeria using a panel regression design over a 10-year period. The study is intended to unveil the impact of forex fluctuations on key performance ratios in the consumer goods sector such as return in assets, return on equity, tobin q and stock market performance. It shall offer recommendations that shall reassure industrialists to rethink their divestment from Nigeria and reduce the growing spate of reduced investor's confidence and foreign direct investment depletion currently being experienced in the country. The study shall hold benefits for industrial practitioners, policy makes and researchers.

Keywords: Forex Volatility, Consumer Goods, Financial Performance, Investor's Confidence.

First Plenary Session / 22

Convergence of History and Governance for Sustainable Development in Nigeria

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Abstract

Nigeria as the most populous black nation in the world is presently being bedeviled with many socio-economic challenges, despite her huge natural and human resources. These challenges have become deeply rooted to the extent that if not addressed, sustainable development in Nigeria might be a mirage.
This article explains the connections between how historical activities and perspectives are capable of informing the economic strategies that can address contemporary socio-economic challenges of Nigeria. Through the exploration of economic policies and practices in history, insights are derived towards identifying the roots of the current economic and social challenges and strategies for more robust sustainable development pathways. This paper recommends for a multidisciplinary and multidimensional approaches which leverage the historical antecedents with economic theory towards sustainable development.

Key Words:

First Plenary Session / 63

Job Satisfaction as A Correlate of Teachers' Performance in Public Senior Secondary Schools, Osun State, Nigeria

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Abstract

This paper investigated teachers' job satisfaction and job performance in public senior secondary schools in Osun State, Nigeria. It adopted descriptive survey of correlational type. The population of the study comprised all 3,546 teachers and all Senior Secondary School III students in the entire 364 public senior schools in Osun State, Nigeria in 2022/2023 academic session. Multistage sampling procedure was used for the study. All the Local Governments areas (LGAs) in the state were stratified into three senatorial districts. Random sampling technique was used to select one LG from each of the senatorial districts while purpose sampling technique was used to select all the public senior secondary schools in the areas. Two research instruments tagged "Teachers' Job Satisfaction Questionnaire"(TJSQ) and "Job Performance Questionnaire"(JPQ) were used to collect data for the study. Validity and reliability of the instruments were carried out. Reliability coefficients of 0.77 and 0.81 were got for TJSQ and TJPQ respectively. The data collected were analysed using Pearson Product-Moment Correlation at 0.05 level of significance. The findings of the study revealed that teachers' job satisfaction and job performance in public senior secondary schools in Osun State, Nigeria were related significantly ($p < 0.05$). It was recommended among others that Osun State government should be more committed to the improvement of teachers' welfare in the areas of salary, working conditions and promotion in order to persistently motivate them to discharge their duties effectively.

Keywords:

First Plenary Session / **66**

Assessment Of Social Dialogue Among Undergraduates' Interactions In Tertiary Institutions In Kwara State

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ABSTRACT
The study investigated social dialogue among undergraduates' interactions in tertiary institutions in Kwara State. The objectives were to examine patterns, uses, challenges and strategic ways of social dialogues among undergraduates. A descriptive survey research design was adopted for the study. The target population of the study comprised all 300 Level students in three out of eight universities in the state. Eighty undergraduates from each selected university which made a total of 240 were the participants. A questionnaire was used for data collection, Data analysis was done using mean and standard deviation to answer four research questions. The findings of the study revealed that undergraduates in the universities generally preferred face-to-face interactions, utilized social media for interaction, made use of gestures, and employed posters for communication. However, they disagreed with the statement related to disassociating themselves from interacting with colleagues. Undergraduates used social dialogue for various purposes such as decoding messages, peace-making, advertisement, task performance, and dispute resolutions. challenges such as stress during discussions with course mates, language barriers, self-interest affecting dialogue, reliance on digital tools, and the potential for confrontation are constraints. Strategic ways of improving social dialogue were making necessary facilities available, encouraging students to engage in interaction, using a common language, embracing social dialogue and emphasizing the goals of communication. Based on the findings of the study, it was recommended among others that universities should provide necessary facilities, encourage students' involvement, use common language and emphasizing communication goals to improve social dialogue among undergraduates in tertiary institutions.
Keywords: Social Dialogue, Social interactions, Undergraduates, Challenges and Strategic ways

First Plenary Session / **77**

Technological Advancements: Strategies for Achieving Sustainable Management of Nigerian Universities: Issues and Prospects

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Abstract

In the modern global landscape, technological advancements have emerged as cornerstones for achieving sustainable development across various sectors, including higher education. This paper

delves into the roles of technological advancements as strategic tools for the sustainable management of Nigerian universities, addressing pertinent issues and exploring promising prospects. It examines various challenges bedevilling the management of Nigerian Universities, ranging from inadequate funding, infrastructure deficits, and administrative inefficiencies to curriculum obsolescence. These challenges hinder the optimal functioning of universities and impede their capacity to fulfil their mandate of knowledge dissemination, research and community service. The transformative potentials of technological innovations, including but not limited to Information and Communication Technologies (ICTs), Data Analytics, Artificial Intelligence (AI) and Virtual Reality (VR), in addressing the management challenges facing Nigerian universities were discussed. By integrating these technologies into various aspects of university management, such as admissions, student enrollment, academic planning, resource allocation and research management, universities can streamline processes, improve decision-making and optimise resource utilisation. Furthermore, this paper explores the prospects of Public-Private Partnerships (PPPs) and collaboration with industry stakeholders, among others, to foster technological innovation within Nigerian universities. It was suggested that policymakers, university administrators and stakeholders should collaborate to develop comprehensive strategies for digital transformation, capacity building and infrastructure development to ensure the sustainability and relevance of Nigerian universities in the digital age.

Keywords: Technological advancement, Sustainable management, Nigeria, University

First Plenary Session / **414**

Use of Artificial Intelligence in Teaching and Learning Basic English Grammar

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Abstract
In recent time, Artificial Intelligence (AI) is one of the trending boom in technological advancement. It is a computer simulation based on human intelligence which is designed to function like human beings and aid in the current evolutions across various fields of life, including language teaching and learning. Proficiency in English Grammar plays a significant role in enhancing speaking and writing skills of language users. The fundamentals of English Grammar discussed here consist of word classes, tenses, spellings, vocabulary building and punctuation marks. This research conducted an experimental exploration of the use of Artificial Intelligence (AI) in pedagogy, learning and the practising of English Grammar. The notable differences in the results between the controlled and experimental groups clearly demonstrated that employing AI applications such as Grammarly, English Grammar Exercises, English Grammar Test, English Grammar Proofreader, and Improve English – Vocab and Grammar can facilitate the teaching of English grammar. Learners can conveniently understand and practise through interaction with these applications, which can serve as alternatives to gaming and excessive use of social media. As a result, this research recommended the innovative integration of AI applications for teaching, learning, and practicing foundational concepts and rules of English grammar.
Keywords: Artificial Intelligence; AI Applications; English Grammar Test; Pedagogy and Practice

First Plenary Session / **76**

Nigeria's Rural Development Policy: Fostering Sustainable Cities and Communities

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Abstract

The Sustainable development goals (SDG), 11 goals lay emphasize on making cities and human settlements inclusive, safe, resilient and sustainable serve as index for this paper. The idea of sustainable cities and communities are essential aspect of contemporary urban planning and governance. The increasing urbanization trend and the challenges associated with unsustainable urban development policies have generated a growing interest in rural development policies. As crucial as rural development is, in achieving sustainable economic growth, unfortunately, Nigeria's fourth republic' s sustainable cities and community development programs has been relegated to the backdoor by successive administration. This has resulted to multifaceted challenges faced by rural communities. This study i) examines the correlation between rural development policy and the concept of sustainable cities and communities as enunciated and promoted by the United Nations, ii) It attempts to discern and interrogate the interwoven issues faced by both rural and urban areas in their quest for development. The research is qualitative in nature. Thematic analysis of data and opinion of purposively selected respondents was adopted. Finding from the study reveal that rural development policy and sustainable cities and communities are closely intertwined and mutually fortifying. The study therefore recommends prioritizing strategies that promote sustainable rural-urban linkages. These include developing efficient transportation networks, promoting sustainable agriculture and land use practices, investing in renewable energy sources, enhancing access to education and healthcare services, and preserving biodiversity and atmospheric stability.

Keywords: Keywords: Rural, Policy, development, Sustainability, cities, communities

First Plenary Session / **69**

Overview of the Sociocultural Effects of Child Adoption on Infertile Couples in Southwest Nigeria: A Review Paper

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Abstract

The challenge of infertility manifests greatly in many African nations because of the high premium placed on fertility and reproduction. While some studies have documented how childlessness is perceived in these societies and the multitude of adverse consequences suffered by affected individuals, studies have been limited to the sociocultural impact of child adoption on infertile couples in the Southwestern part of Nigeria. This paper focuses on analyzing the knowledge, attitude and perception of infertile couples based in the region of interest towards and about child adoption with a main emphasis on the social and cultural influence of child adoption on the childless. Secondary data comprising mainly existing studies and reviews from scholars were explored. Despite being perceived as the most educated part of the country, the sociocultural factors in the Yoruba land still constitute a major bottleneck to the adoption of children by infertile couples with very minimal patronage of this alternative. The summary of the findings was that child adoption is very difficult to practice in South-Western Nigeria. Measures such as advocacy, community enlightenment, enactment and enforcement of supportive laws that will protect all parties involved among others should be encouraged.

KEYWORDS:

First Plenary Session / **378**

The Role Of Artificial Intelligence (Ai) In Collaborative Learning And Scientific Research In Universities In Kwara State, Nigeria

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Abstract
This study investigates the utilization of Artificial Intelligence (AI) in enhancing collaborative learning and scientific research within universities in Kwara State, Nigeria. The research involves 250 students and 120 lecturers from various disciplines among the universities. Quantitative methods, including surveys and statistical analysis, are employed to gather data on the current level of AI integration, its impact on collaborative learning, and its contribution to scientific research. Data collection involves structured questionnaires administered to both students and lecturers, focusing on their perception, usage, and experience with AI technologies in academic settings. Findings reveal a moderate level of AI integration in collaborative learning and scientific research activities. Both students and lecturers acknowledge the potential of AI in facilitating knowledge sharing, enhancing research productivity, and fostering interdisciplinary collaboration. However, barriers such as limited access to AI resources, inadequate training, and skepticism towards technology adoption are identified as significant challenges. Recommendations include the implementation of comprehensive AI training programs for both students, and lecturers, investment in AI infrastructure, and the establishment of interdisciplinary AI research centers by the stakeholders among others. In conclusion, while AI holds immense promise in transforming collaborative learning and scientific research in universities within Kwara State universities, concerted efforts are needed to overcome existing challenges and maximize its benefits. By addressing barriers and promoting a culture of AI integration, universities can harness the full potential of AI to advance academic excellence and innovation in the country.

Keywords: AI-Infrastructure, Collaborative Learning, Artificial Intelligent, Scientific Research

First Plenary Session / **425**

Public and Private Partnerships in the Empowerment of English Language Teachers in Mozambican Remote Areas

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ABSTRACT:
Mozambique, a Southern African country, composed of diverse traditions, cultures and linguistic backgrounds, is the only Portuguese-speaking country in the region, following the language heritage from the colonial period (Portuguese Empire). All the neighbouring countries are English-speaking nations, with whom Mozambique has strong relations in several areas such as diplomacy, agriculture, education, human resources, defence, amongst others. In this regard, English language competence is an extremely important aspect for the Mozambican people, since it allows them to effectively communicate with other citizens, especially when they move to a new country, whether for academic purposes (studies/research) or professional activities (work/labour market). Therefore, it

is common ground and sense that English language teachers, particularly those ones who perform their duties in the rural areas, where access to information and education displays a big challenge, require empowerment through further training and capacity building in order to promote high quality teaching and learning process. Thus, the present paper seeks to highlight the importance of English language training in Mozambican rural areas and how can the local government aside public sector institutions embrace their intents with a view to foster English language skills towards Mozambican people, particularly in the rural areas. Lastly and most importantly, it is strongly believed that the results of this paper will contribute to persuading the relevant stakeholders (government, private sector and community members) to consider this proposal, and will also allow researchers to conduct further studies regarding this subject-matter.
Keywords: English Language, English Training, Capacity Building; Empowerment, Remote Areas

First Plenary Session / **68**

Exploring the Development and Convergence Analysis of a Self-Starting Algorithm Utilizing Orthogonal Approximating Function for Solving PDEs

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Numerical approximation of partial differential equation (PDE) models is essential for modeling physical systems, necessitating robust methodologies. This article introduces the Self-starting algorithm (SSA) developed by interpolation and collocation procedure via Orthogonal Approximating functions for second-order numerical approximations of ordinary differential equations (ODEs) generated from one or two-dimensional physical systems. The approach involves transforming governing PDEs into a system of algebraic ordinary differential equations by replacing spatial derivatives with a central difference scheme for temporal derivatives. The theoretical analysis properties of the SSA was examined, and found to satisfy the requirement for convergence, thus align with multi-step methods' principles. Numerical results obtained with SSA exhibit good agreement with theoretical solution. Additionally, the absolute errors was computed across diverse problems, demonstrating SSA's strength and efficiency in practical scenarios. Moreover, a comprehensive comparative analysis with existing methods from recent literature was conducted, highlighting SSA's superior performance. Finally, findings are established through illustrative tables and figures, emphasizing SSA's transformative potential in advancing the numerical approximation of two-dimensional second-order partial differential equations in physical systems.

Keywords: Self-Starting Algorithm, Convergence Analysis, Orthogonal Approximating Function, Collocation and Interpolation, Second-order Partial Differential Equations

First Plenary Session / **100**

Factors Influencing Adoption of Climate-Smart-Agricultural (Csa) Practices among Smallholder Farmers: Evidences from Vadi Communities in Kwara State

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Abstract

Weather conditions critically influence agricultural practices in Nigeria. Hence, the climate change that the whole world is experiencing in the last four decades has led to extreme and erratic weather conditions, especially temperature and rainfall. Therefore, smallholder farmers need to adopt management strategies known as climate-smart agricultural (CSA) practices to efficiently and effectively utilize nature to their advantage. This study identified, examined, and ranked different factors influencing the adoption of CSA among smallholder farmers in VADI communities. It also proffered practical solutions to some factors hindering the adoption of CSA. Survey method using a structured questionnaire and a semi-structured interview checklist was adopted to elicit relevant information from respondents. Factor analysis is used to identify and rank factors influencing the adoption of CSA in VADI communities. Mann-Whitney U-test was used to test the proposed hypotheses. The study revealed that factors influencing the adoption of CSA in VADI communities, in order of importance, are: availability of extension services and inputs; social factors; economic factors; the physical environment and seasons; household heads and enterprise characteristics; as well as the availability of infrastructural facilities. As a result of the importance of extension services, the study recommended that the government support the establishment and operation of private extension services. For more robust outcomes, the study recommended the use of time series data and panel studies to capture some dynamics in the adoption process. Similarly, the study could be extended to other geopolitical zones of the country to gain better insight.

Keywords: Adoption, Climate-Smart Agriculture (CSA) Smallholder farmers.

First Plenary Session / 137

Perceived Determinants of Colleges of Education Students'Engagement in Religious Radicalism in Kwara State, Nigeria

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Abstract

This study examined religious studies students'perceived factors that determine students'engagement in religious radicalism within the Colleges of Education in Kwara State, Nigeria. This study adopted descriptive survey method. Purposive sampling technique was used to select four hundred

(400) students of Religious Studies in four selected Colleges of Education in Kwara State, Nigeria. Questionnaire was used to elicit information from the respondents. Validity and reliability of the instrument were carried out and the reliability co-efficient was 0.86. Two research questions were raised and answered using the percentage. The findings revealed multifaceted determinants shaping students' inclination towards religious radicalism, including socio-economic factors, ideological influences, institutional environments, and psychosocial dynamics. The conclusion of the study underscores the significance of understanding the perceived determinants to formulate effective interventions aimed at countering radicalization and promoting peaceful coexistence within educational settings. It was recommended in the study that school management in collaboration with the government should bring up a standing law to monitor the activities on religion organisations on the campus.

Keywords: Perceived, religious radicalism, colleges of education, determine, engagement

First Plenary Session / **29**

Potential Benefits and Consequences of Improving Education in Nigeria with Artificial Intelligence (AI)-Powered Learning Platforms

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Abstract

There are several issues with Nigerian education today, including differences in learning outcomes, teacher shortages, and restricted access to high-quality education. However, AI-powered learning platforms offer opportunities to address these challenges by providing personalized learning experiences, adaptive instruction, and enhanced teacher support. The consequences of incorporating AI into Nigeria's educational system are covered in this article, along with the socioeconomic effects. Initiatives and achievements of current projects in Nigeria demonstrate how AI-powered learning platforms can be used to increase educational access and enhance learning outcomes. The necessity of funding AI-powered education projects for Nigeria's future development is emphasized in the recommendations for growing AI initiatives, encouraging innovation, and resolving equality challenges.

Keywords:

First Plenary Session / **229**

Bridging the Gap: How Joint Initiatives can Shape a Sustainable Future

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Abstract

Joint initiatives between universities and industries are crucial for bridging the gap between academic knowledge and real-world application. These initiatives combine academia's expertise with industry experience, fostering innovation and sustainable development. By aligning curricula with evolving industry needs, universities can equip graduates with relevant knowledge and skills, while industries benefit from fresh perspectives and innovative ideas generated by collaboration with academic institutions. This paper explores the significance of joint initiatives in a sustainable future, highlighting the power of collaboration, addressing barriers, showcasing case studies, and emphasizing technology's role. It aims to inspire stakeholders towards effective collaborative action for a more sustainable world. The summary emphasizes the importance of joint initiatives in bridging the gap between academia and industry, highlighting their role in driving sustainable development, and calls for universities and industries to embrace and expand these initiatives for a brighter future.

Keywords: Joint Initiatives, Academia and Industry, Sustainable Development

First Plenary Session / **356**

Integrating Artificial Intelligence Courses into Pre-Service Teacher Programmes as Perceived by Lecturers of Colleges of Education

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Abstract

This study investigates the perceptions of lecturers from public and private colleges of education in Kwara State regarding the integration of Artificial Intelligence courses into pre-service teacher education programs. The college is segmented into various schools and departments, provide a comprehensive setting to assess the potential and challenges of incorporating AI into teacher training curricula. A mixed-methods approach would be employed, utilizing both quantitative and qualitative data collection instruments. The sampling procedure involved stratified random sampling to ensure representation across different schools and departments. A population of approximately 1,750 lecturers with a sample size of 150 lecturers would be selected, comprising 75 lecturers from public colleges and 75 from private colleges. The instruments used for data collection would include structured questionnaires and semi-structured interview guides. The questionnaires, designed would capture quantitative data while the semi-structured interview guides. The findings are likely to indicate a predominantly positive attitude among lecturers towards the integration of AI. Lecturers may likely advocate for a phased implementation approach, starting with introductory AI courses and progressively incorporating more advanced applications. Some of the recommendations among others to achieve integration is the provision of infrastructure, access to AI tools, and sufficient training for both lecturers and students. In conclusion, lecturers in Kwara State's colleges of education are optimistic about the benefits of integrating AI into pre-service teacher programmes, The integration promises to equip future educators with the necessary skills and knowledge to leverage AI for enhanced teaching and learning outcomes.

Keyword: Artificial Intelligence Courses, Integration, Lecturers of Colleges of Education Perception, Pre-service Teacher Programmes,

First Plenary Session / **142**

The Role of Emerging Technology in Chemistry Teaching and Learning for Sustainable Future

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Abstract:
The discipline of science education, and more specifically the teaching and learning of chemistry, has been greatly impacted by the rapid advancement of technology. Teaching chemistry through the use of information and communication technology ICT and the emerging technological developments is becoming more and more common. A paradigm shift in the educational system has resulted from the effective integration of technology in instruction processes, this has greatly improved learning outcomes by making the teaching and learning process dynamic, fascinating, interactive, and engaging. The relevance of integrating emerging technologies into chemistry teaching and learning is the main focus of this paper. Attention was draw to the functions of emerging technologies, which are in high demand right now. It also covers the significance of providing chemistry teachers and students with up-to-date technology skills as well as the continuous maintenance and improvement of those abilities to ensure a sustainable future. The researcher discusses how emerging technologies such as biotechnology, nanotechnology, information, and communication technology could be incorporated into chemistry curricula in secondary schools and universities for a sustainable future. This paper also focuses on the expectation pattern of emerging technology and how it could be used to sustain the future. Relevant literatures were reviewed in the areas of science education, chemistry learning, emerging technology, and education for a sustainable future. The researcher concluded that the adoption of emerging technology in teaching chemistry could help to achieve a sustainable future.

First Plenary Session / **102**

Evaluating Effects of Letrozole, Mifepristone and Dhea on Ovarian and Uterine Cytoarchitecture

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Abstract

Polycystic ovary syndrome (PCOS) is the most common gynaecological, endocrine disorder that occurs during reproductive age and is a significant cause of anovulatoryinfertility. Letrozole is an aromatase inhibitor which negates the action of the aromatase enzyme, which results in the buildup of male hormones (testosterone) in the females, causing hyperandrogenism, which is a hallmark of Polycystic Ovarian Syndrome. Mifepristone (RU486) is a progestin antagonist that acts to arrest the actions of the progesterone hormone, resulting in follicular atresia and anovulation. DHEA is an androgen which was also administered in a bid to cause hyperandrogenismin the rats.
Aim: This study aimed to evaluate the effects of these hormones on the cytoarchitecture of the ovaries and uterus, with a view to assess their various PCOS-like histological features.
Methodology: Animals were grouped mainly into three: Letrozole, Mifepristone and DHEA groups, which were further divided into two subgroups each, administered low and high doses of letrozole orally, Mifepristone and Dehydroepiandosterone (DHEA) subcutaneously. Each of the subgroups

also had a comparison control group. Following the completion of administration, the Wistar rats were euthanized, and their ovaries and uterus were collected for histological analysis.
Result: Increased proliferation of ovarian follicles was noted in the treated groups compared to control, as well as thickening of the endometrial layer.

Keywords: Hyperandrogenism, Anovulation, Cytoarchitecture, Proliferation, PCOS.

First Plenary Session / **15**

Enhancing Inclusivity in University Classrooms: Exploring Educators' Readiness To Teach Arabic And Islamic Studies For A Sustainable Future

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Abstract

In today's diverse educational landscape, fostering inclusivity in university classrooms is increasingly recognized as essential. This research investigates how well-prepared educators are to teach Arabic and Islamic studies in inclusive settings, acknowledging the significant role these subjects play in promoting mutual understanding, cultural exchange, and sustainable development. Employing a qualitative methodology, data were gathered from university lecturers through semi-structured interviews and analysed thematically. The findings offer nuanced perspectives on educators' views, obstacles, and strategies for enhancing inclusivity in Arabic and Islamic studies instruction. Key themes identified encompass the significance of cultural proficiency, adaptability in teaching methods, and the incorporation of diverse viewpoints to enrich student engagement and academic outcomes. Furthermore, the study underscores the necessity for continuous professional development and support mechanisms to enhance educators' readiness for inclusive teaching approaches. This study contributes to the ongoing conversation on inclusive education by presenting actionable insights and recommendations aimed at cultivating a more inclusive learning environment in university classrooms, thus advancing the aspiration for a sustainable and harmonious future.

Keywords: Arabic and Islamic Studies, Inclusive Education, Sustainable Future, University Education.

First Plenary Session / **178**

Curriculum Innovation: A Panacea To The Achievement Of Sustainable Educational Growth And Development In Kwara State, Nigeria

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Abstract
Innovation in curriculum is a veritable need in order to boost the effectiveness in education and this eventually leads to sustainable development. The aim of this study is to examine curriculum innovation: a panacea to the achievement of sustainable educational growth and development in Kwara State, Nigeria. In this study, historical, analytical and phenomenological methods were used to do justice to this paper.The historical method was used to discuss the historical background of curriculum in education, the analytical approach was used to analyse the impact of curriculum innovation on the sustainable development in education while the phenomenological method was used to relate the impact of curriculum innovation to our contemporary issues in education in Nigeria. The findings of this study revealed that innovation in curriculum is a veritable panacea for achieving sustainable educational growth and development in teaching and learning process in Kwara state, Nigeria. It is concluded that innovation in curriculum can bring sustainable development in education. It is suggested that government should recruit more qualified, competent and effective teachers to enhance new innovative contents, skills and practices for sustainable educational growth and development in Kwara state, Nigeria.

Key Words: curriculum, innovation, growth, development, sustainable

First Plenary Session / **86**

Is the inclusion of high-quality cassava flour in wheat flour sensorily acceptable and profitable for doughnuts, cookies, and chin-chin production?

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Abstract
Considering the increase in consumption of baked products in Nigeria, it is foreseen that there will be a higher demand for wheat flour in the future. Hence, a need to assess the sensory acceptability and profitability analysis of the use of high-quality cassava flour (HQCF) (unfermented cassava flour) as a composite in wheat flour for doughnuts, cookies, and chin-chin production. The doughnuts, cookies, and chin-chin were produced from the HQCF composite with wheat flour in ratios of 5 –15%, using 100% wheat flour as control. The sensory acceptability of the products was done by 15 panelists using a well-structured questionnaire, and the profitability was calculated using standard methods. The results showed that the 5% HQCF composite chin-chin was comparable in terms of aroma, texture, and overall acceptability; the 5% HQCF composite cookies were comparable in terms of appearance, texture, colour, and taste, and the 5% HQCF composite doughnuts were comparable in terms of texture, aroma, and appearance, to that of the control products. Furthermore, all the HQCF composite products are viable with the cookies having approximately 143%, 163%, and 297% gain from the 5%, 10%, and 15% HQCF composite flour, respectively; doughnuts having about 24.96%, 40.37%, and 47.98% gain from the 5%, 10%, and 15% HQCF composite flour, correspondingly, and the chin-chin with about 5.03%, 17.94%, and 22.08% gain from the 5%, 10%, and 15% HQCF composite flour, respectively. Therefore, at least 5% HQCF composite cookies, chin-chin, and doughnuts may not only be profitable but acceptable just like the control.
Keywords: Unfermented cassava flour composite products, wheat flour, sensory acceptability, profitability analysis, viable business

First Plenary Session / **232**

Sustainability of Career development demands through University-Industry collaboration Guidance Approach

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Abstract

In the dynamic digital era of today, sustaining of career development necessitates a seamless blend of adaptability and collaboration, particularly between academia and industry. This is to critically look into innovative guidance framework that revolves around the concept of university-industry collaboration, which is apt to nurture the contemporary enduring career sustainability. At its core, this approach synergizes academic proficiency with industry insights, with the overarching goal of endowing both students and professionals with the requisite skills and knowledge essential for flourishing within the dynamic contours of contemporary job markets. Through a multifaceted array of strategies encompassing partnerships, mentorship initiatives, and immersive experiential learning endeavors, individuals are empowered to traverse their career pathways with fortified resilience and unwavering agility. This paper would meticulously examine the mechanisms underpinning such collaborations, while also shedding light on their manifold benefits and inherent challenges. Foremost among its merits lies the capacity of these collaborations to effectively bridge the perceptible chasm separating theoretical learning from pragmatic application, thus rendering the educational journey more holistic and impactful. Ultimately, this collaborative guidance framework would serve as baseline for fostering symbiotic relationships between academia and industry, recognizing them as indispensable agents in sculpting sustainable career trajectories within the contemporary workforce milieu in this 21st Century.

First Plenary Session / **206**

Perception and Attitude Toward Online Learning Platform among Undergraduates in Post Covid-19 in Universities in Kwara State

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Abstracts

Online Learning Platform (OLP) offers educational opportunities via the internet, facilitating interaction between students, tutors, and peers, eliminating geographical and temporal constraints. The onset of the COVID-19 pandemic necessitated the closure of traditional educational institutions, prompting the widespread adoption of OLP. Specifically, the study (i) examined undergraduates perceived usefulness of OLP; (ii) ascertained undergraduates perceived ease of use of OLP; (iii) examined the attitude of undergraduates towards the use of OLP. The study adopted descriptive research of the survey type. The population were university undergraduates in Kwara State while the target population were undergraduates in selected universities. Simple random sampling technique was used to select 383 respondents from the total population of 78,082 undergraduates. A researcher-designed questionnaire was used to collect data from the respondents. The instrument was pilot tested on 30 undergraduates with a value of 0.73, 0.70, and 0.82. Frequency count, percentage and mean were

used to answer research questions, while hypotheses were tested using independent t-test at 0.05 level of significance. Result showed that Undergraduates perceived online learning platform useful, easy to use and have positive attitude. The study recommended among others that Institution should provide enabling environment and internet acccess for the students to use OLP.

Keywords: Perception, Attitude, online Learning Platform, Gender

First Plenary Session / **380**

Analysis And Comparison Of Photovoltaicarray Configurationsunder Partial Shadingconditions

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Abstract

Rising global energy demand, linked with population growth, relies heavily on depleting fossil fuels, contributing to environmental harm. In response, renewable energy, particularly solar photovoltaics (PV), is gaining traction. This study explores the impact of partial shading on 5x5 PV arrays with Series-Parallel (SP) and Total Crossed Tied (TCT) configurations. Six shading patterns, including single module, consecutive row/column, and diagonal shading, were examined. Analysis of voltage, current, and power at the Maximum Power Point (MPP) quantified shading effects on power loss and overall array performance. Results showed significant power reduction across all configurations and patterns, with column and diagonal shading causing the highest losses, while row shading incurred comparatively lower losses. TCT consistently outperformed SP, especially under row shading, exhibiting superior efficiency, power output, and minimal losses. The study recommends PV installers enhance knowledge of TCT configurations to mitigate partial shading effects, improving the overall user experience. This underscores the importance of efficient array designs to optimize PV system performance in the face of increasing partial shading scenarios.

Keywords: partial shading conditions,photovoltaic, PV array, series-parallel configuration, total-cross-tied configuration.

First Plenary Session / **197**

Sociological Implications of Newspapers Framing of Drug Abuse in Nigeria

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Abstract

Nigerian youth is bedeviled with series of crime-related activities such as examination malpractice, bullying, drug addiction, etc. Drug abuse is considered to have been the mother of all crimes as it is believed to have power of making people to be temporary insane. Mass media as a change agent

is saddled with the responsibility of influencing societal values to uphold national integrity. However, there is an alleged accusation on the Nigerian mass media especially the newspapers are yet to properly educate the youths on danger inherent in drug addiction. Hence, this study examines the effect of newspaper's framing of drug abuse in curbing drug addiction among Nigerian youth. The study is underpinned by framing theory. Qualitative content analysis is employed to gather data from the manifest content of The Punch and Daily Trust newspapers published between January 1, and March 31, 2024. The data gathered were analysed by adopting thematic analysis. The findings reveal that Nigerian mass media especially the newspapers do not focus more on the societal and security implications of drug addiction as most of the newspaper reports analysed do not examine the health, security as well, as sociological implications of drug addiction in a society. Based on the findings of this study, the study recommends among others that the Nigerian mass media especially the newspapers should employ interpretative approach to drug abuse reportage as this can orient Nigerian youths on the danger inherent in drug addiction. This if done, can empower youths thereby,facilitating orderliness, national development and national security in Nigeria.

Keywords: Drug abuse, Drug addiction, Nigerian newspapers, Visual communication, Youths, National security

First Plenary Session / **119**

Awareness and Utilization of Artificial Intelligence (AI) Tools for Enhancing Mathematics Learning among Pre-service Teachers in Kwara State

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Abstract
This research investigates the awareness and utilization of Artificial Intelligence (AI) tools for enhancing mathematics education among pre-service teachers in Kwara State. A mixed-method approach, incorporating both quantitative and qualitative data, is utilized to gain insights into participants' awareness of AI tools for math learning and their experiences with using such tools. The study employs a survey-based descriptive research design to collect data from a sample of 200 pre-service teachers from four purposively selected universities in Kwara State, Nigeria using questionnaire. A sample of 20 pre-service teachers were involved in interview section of the survey. Findings indicate varying levels of awareness among pre-service teachers regarding AI tools in mathematics education, with some demonstrating enthusiasm for integration while others express hesitancy. Factors influencing pre-service teachers' decisions to use AI tools, including access to technology, training, perceived effectiveness, and pedagogical beliefs, are also explored. The study underscores the importance of understanding these factors for informing educational policies and teacher training initiatives aimed at promoting AI integration in mathematics education.
Keywords: Artificial Intelligence, mathematics education, pre-service teachers, awareness, utilization.

First Plenary Session / **198**

Comparison of Probability Distributions on the Number of Antenatal Visits

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Abstract

There are several complications that arise from insufficient antenatal care received by pregnant women. Several studies have shown that lack of education, poverty and other factors give rise to low antenatal attendance in Nigeria and the consequences are numerous and grievous. The aim of this research work is to determine if the frequency of antenatal visits depends on age, type of place of residence, wealth status, educational level and region of pregnant women.
In order to accomplish the stated aim, bar chart was used to describe the distribution of the data and the data showed evidence of zero inflation. This research work compared several zero inflated distributions using the Vuong test and the Akaike Information Criterion (AIC). Zero inflated negative binomial distribution was selected and used to carry out regression analysis on the number of antenatal visits of pregnant women in Nigeria. The data used involved 3493 respondents obtained from the demographic and health survey carried out in Nigeria in 2010.
Using the number of antenatal visits as the response variable, the study showed that low antenatal care attendance was prevalent among uneducated women. Educated women have more desire for antenatal care. Investigation also revealed that desire for more antenatal visits by pregnant women increases with increase in wealth. Findings also showed that women in southern part of Nigeria had desire for more antenatal visits. The study also revealed that preference for more antenatal visits increases with age. The type of place of residence of pregnant women does not affect the frequency of their antenatal visits.

Keywords: Zero Inflated Distributions, Regression Analysis, Number of antenatal visits

First Plenary Session / 64

Numerical solution of Physical Model Problems in Applied Sciences by a One-Step Approach with Embedded Hybrid Points

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Abstract

Numerical methods play a pivotal role in solving complex physical model problems across various disciplines in applied sciences. One of such approach is the one-step method with embedded hybrid points. This article aims to elucidate the principles, applications, and advancements of this innovative numerical technique in solving a variety of physical model problems. By adopting the principle of collocation and interpolation with embedded hybrid points, this approach offers enhanced

accuracy, efficiency, and versatility, making it an invaluable tool for researchers. Through a comprehensive analysis, the article sheds light on the theoretical analysis, computational algorithms, and practical implementations of the one-step approach with embedded hybrid points on varieties of models problems such as the SIR mode, Mixture model, and other related models in applied sciences. The numerical results indicate that the proposed method surpasses other existing numerical techniques in terms of efficiency, as observed in the comparative analyses.

Keywords:

First Plenary Session / **97**

Isolation, Identification and Antibiogram of Bacteria from Selected Food Condiments Sold in Ilorin, Kwara State

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ABSTRACT
Condiments are added to food to enhance aroma and flavour which improves the taste of food but when contaminated with pathogenic bacteria, foodborne illness is inevitable. The study aimed at isolating and identifying bacteria from selected food condiments sold within Ilorin metropolis and also evaluate their sensitivity to standard antibiotics. Four condiments (ginger, garlic, turmeric and dried pepper) were purchased from Oja-Oba, Ganmo and Yoruba road markets. Isolation and identification were done using standard microbiological methods. Total bacterial counts were obtained using pour plate method. Sensitivity testing of the isolates against some antibiotics was carried out using standard procedures. Total heterotrophic and coliform counts ranged from 1.38 ± 0.38 to 21.52 ± 5.31 x 105 cfu/ml and 1.33 ± 0.52 to 6.67 ± 4.93 x 105cfu/ml respectively with garlic sample having the highest counts and turmeric sample having the least counts. Six bacteria were isolated, namely Staphylococcus aureus, Salmonella typhi, Bacillus sp, Pseudomonas aeruginosa Escherichia coli and Enterobacter sp. Staphylococcus count ranged from 1.00 ± 1.00 to 4.00 ± 1.00 x 105cfu/ml. Salmonella count ranged from 1.33 ± 0.58 to 4.67 ± 3.06 x 105cfu/ml. Bacillus sp demonstrated highest level of susceptibility to Ciproflaxacin, Amoxacillin and Ampiclox (14.00 mm) while Enterobacter sp had the lowest sensitivity to Streptomycin (2 .00 mm). The bacterial isolates were resistant to Zinnacef, Rifampin, trimethoprim-sulfamethoxazole and erythromycin. It can be concluded that these food condiments commonly used during cooking can be easily contaminated by pathogenic bacteria which are multidrug resistant, hence causing public health hazard.
Keywords: Condiments, foodborne illness, pathogenic bacteria, contamination antibiotics.

First Plenary Session / **56**

Navigating Global Energy Demand and Supply: Renewable Energy Resources as Alternative to Mitigate the Energy Crisis of Sub-Saharan Africa

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Abstract

The paper highlights the potentials in renewable energy sources as credible alternative to the non-renewable energy sources of the global energy concerns, particularly as it affects the sub- Saharan Africa. The ever- increasing energy needs and dwindling reserves of the world have spurred efforts to enlighten the populace on energy availability, need and how to harness the various forms it existed for the good of mankind. The pressure of demand and supply of energy and the energy crises are discussed. The slow pace of development in sub- Saharan Africa and other developing nations are attributable mainly to paucity of energy supply as highlighted. For instance, the instability in electricity supply is a consequence of energy insufficiency and poor management of the available ones. Demerits of non-renewable sources of energy are projected emphasizing their damaging effects on the environment and the exhaustible quantity. It is recalled that most of the non-renewable energy sources are derived from fossil fuels (coal, crude oil, liquified petroleum gas and compressed natural gas) and radioactive elements (such as natural uranium). Incidentally, the non- renewable energy sources constitute the world's greatest energy supply today. Spotlight is beamed on renewable energy technologies that can be transformed into usable forms and veritable alternatives. The renewable energy sources being considered include water (hydro), wind, sunlight, geothermal, biomass, sea waves and ocean tides. Reasons for intense advocacy to switch over to renewable sources of energy are brought to limelight. Recommendations are made on how to mitigate the energy problem.

Key words:

First Plenary Session / **75**

Food security and global agriculture

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Abstract

Food security and global agriculture are critical for sustaining the growing global population, projected to reach 9.7 billion by 2050, nearly 690 million people are hungry, underscoring the urgency for enhanced food production systems. Ensuring that all the individuals have access to sufficient, safe and nutritious food is a complex challenge that involves multiple sectors and Stakeholders.
Global agriculture must adapt to changing climatic conditions, address water scarcity, and improve soil health to increase productivity sustainably. Moreover, the equitable distribution of food, reduction of food waste, and enhancement of supply chain efficiencies are essential components of a comprehensive strategy to achieve food security. As the global population continues to grow, innovative approaches and international cooperation are imperative to develop resilient agricultural system that can meet the increasing demand for food while preserving natural resources for future generations.
As the global population is project to reach 9.7 billion by 2050, the urgency for a sustainable agricultural system that can adapt to changing climate dwindling resources and environmental constraint is paramount.
The Green revolution marked a significant milestone in agricultural history, leading to an increase in the production of staple food crops. This has also led to monoculture trap, causing malnourishment and hidden hunger due to lack of dietary diversity. Today's agricultural challenges require a reframed approach that integrates the entire agricultural cycle, from production to distribution, while emphasizing effective waste management and resource conservation.
Innovations in scientific methods, such as biofortification and genetic engineering play a crucial role in enhancing crop yield and nutritional value.
However, this technological advancement must be integrated into ecological based farming system and evaluated for their environmental, economical and social impacts.
This abstract highlight the need for dynamic policies and collaborative efforts that address the multifaceted aspects of food security and promote a sustainable, resilient global agricultural system.

First Plenary Session / 276

The Dark Side of Leadership: A Case Study of Leadership, Resources Application and Management in Tertiary Education System

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ABSTRACT:

The constructs, concepts, and perceptions of leadership is commonly assumed without clarity and taken for granted in human affairs. It should nonetheless be seen that appropriate conceptual understanding and application is necessary for any productive outcome. In tertiary education system, resources application and management in Nigeria has been hinged on the Dark Side of Leadership,which may be suggestive of impulsivity, emotionality rather than rationality. Personality types(a product of nature and nurture), predisposing the leadership to a syndrome known commonly to Nigerians as," Winner takes all", could be spotlighted as a major influencer of the Dark Side of Leadership experienced in resources application and management. Decision-making process of tertiary education system leaders is influenced by various psychological factors that can significantly impact resources application and management in the rapidly evolving educational landscape. Some of the key psychological impetuses driving their decisions may include following: Institutional reputation and prestige, competition and status quo biases,financial demands and pressures, short-term versus long-term goals,leadership personalities and tendencies(biases) etc. In conclusion, grasping the psychological drift behind dark side leaders' decisions and their implications on resources application and management is crucial in understanding the 'whats and hows' including navigating the rapidly evolving educational landscape offered by these leaders.Effective resource allocation requires a balance between short-term demands and long-term strategic vision, data-driven decision-making, adaptability, and a willingness to invest in innovation. Collaboration and transparency play essential roles in optimizing resources application and management including promoting the overall growth and success of tertiary educational system.

Keywords: Education, Leadership, Tertiary, Psychological

First Plenary Session / 82

Influence of Learning Environment on the Academic Performance of Primary School Pupils in Ogbomoso South LGA, Oyo State.

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Abstract

The study centred on the influence of learning environment on pupils'academic performance in primary school in Ogbomoso South Local government area of Oyo State. Descriptive research design was adopted. Two research questions and one research hypothesis were generated. The targeted

population comprised all public primary schools. A simple random sampling technique was used to select two hundred (200) respondents, ten (10) each from twenty (20) public primary schools. The instrument used for data collection was a self-constructed questionnaire. Descriptive and inferential statistical tools were used to answer the questions and test the hypothesis respectively. The findings showed that learning environment has a positive influence on primary school pupils'academic performance; the contributions of school physical structure, classroom experience and school location to the academic performance of primary school pupils in Ogbomoso South LGA were not significant, but the contributions of staff-students relationship was significant. Recommendations were made that teacher-pupils relationship should be given a focus in order to develop a good interaction which is helpful in promoting pupils'academic performance; a well-programmed learning environment should be designed for the purpose of improving pupils'academic performance.

Keywords: Learning, Environment and Academic Performance

First Plenary Session / **103**

Information Sharing Strategy and Performance of University Academic Staff in The South-West of Nigeria

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Abstract

The academic environment in Nigeria, particularly within the South-West region, is undergoing significant transformations driven by technological advancements, globalization, and the increasing demand for high-quality education. In this dynamic environment, the performance of academic staff plays a critical role in the overall success of universities. Despite the importance of information sharing, there is a notable gap in understanding how this strategy influence the performance of Nigerian universities, particularly within the context of the South-West region. Therefore, this study examines information sharing strategy and performance of academic staff in universities within the South-West region of Nigeria. 900 sample size was drawn from a total population of 12,844 academic staff members of Public Universities in the South-West, Nigeria, using stratified random sampling method. The data were analysed using multiple regression analysis. Findings indicated that constructs of information sharing have positive and significant effect on academic staff performance, such as research output, teaching quality, and institutional contribution. The findings provide valuable insights for university management and policymakers seeking to enhance information sharing processes in order to improve the performance of academic staff.

Keywords: Information Sharing Strategy, Academic Staff Performance, Knowledge Transfer, Quality of Information Shared, Research Productivity, Interdisciplinary Research Initiatives.

First Plenary Session / **23**

Dietary Cinnamon-Zinc Supplementation on Serum Biochemical Indices of Heat-Stressed Broiler Chickens

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ABSTRACT
Climatic change has caused extreme heat stress (HS) globally, thereby impairing both human and animals'health, while causing economic loses and serious public health concern.Use of herbal supplements to mitigate HS effect by strategically augmenting innate antioxidant enzymatic activities has been focalised lately. This study investigated the potential of cinnamon-zinc supplementation in broiler chicken reared under heat stress. 240 day-old Arboracre broiler chickens (40g+_2) were randomly grouped into five treatments (48 chicks/treatment) with 16 chicks/replicate. T1 contained cooler environment (25oC +_2), T2- no treatment (control). T3-800mg/kg cinnamon powder, T4-800mg/kg cinnamon powder + 40mg/kg of zinc and T5-1000mg/kg of cinnamon + 40mg/kg zinc.At the end of the 10-week experiment, blood was collect from 9 birds/treatment and centrifuged. Chickens fed T5-1000mg/kg Cinnamon powder + 40mg zinc/kg had the highest values for total protein (9.50g/dl), globulin (7.76 g/dl), glyceride (1.70g/dl) and albumnin (1.70 g/dl) than other treatmnents. The serum total protein, globulin, and albumin values obtained in this study were within the normal range values for chicken. In conclusion, Cinnamon powder and zinc supplementation could be used to reduce heat stress using 1000mg of Cinnamon Powder + 40mg of zinc/kg of basal diet without adverse effect on the chickes.

Keywords:Chickens, serum-biochemistry, heat-stress, cinnamon, Zinc

First Plenary Session / **81**

Synthesis, Characterization, Crystal structures, Hirsfeld Surface Analysis, and Antibacterial studies of Manganese(II) Phenoxyacetate and Zinc(II) 2-chlorobenzoate with 1,10-Phenanthroline or 2-ethylimidazole

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Abstract
In this report, we present the synthesis and characterization of two compounds: Mn2(PAA)2(Phen)42.H2O, 1 and Zn(EtIm)2(CBA)2, 2, where PAA represents phenoxyacetic acid, CBA represents 2-chlorobenzoic acid, Phen represents 1,10-phenanthroline, and EtIm represents 2-ethylimidazole, respectively. These compounds were obtained in crystalline form through slow evaporation at room temperature and were characterized using single crystal X-ray diffraction. Additionally, FTIR and UV-vis spectroscopy were employed to elucidate the structures of these new compounds. Both compounds 1 and 2 crystallize in the monoclinic system with space group P21/n. Hirshfeld surface analysis reveals various intermolecular interactions in their crystal structures. Furthermore, these new complexes exhibit potent inhibitory activity against all tested clinical bacterial strains. Compound 1 demonstrates higher antibacterial activity than 2 in all experiments, as evidenced by a comparison of their zones of inhibition.
Keyword: phenoxyacetic acid; 2-chlorobenzoic acid; crystal structure; Hirshfeld surface analysis; antimicrobial activities

First Plenary Session / **83**

Heterosis and Maternal effect for weekly Bodyweight in six diallel crosses of Japanese Quail

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Abstract

Crossbreeding is the mating of two or more genetically unrelated or different breeds; strains or inbreed lines. Reciprocal effect is the mating of two genetically distinct groups of animals in which their roles as male and female are interchanged. Crossbreeding and reciprocal effect are important instruments for breeders to improve economically important traits like body weight in farm animals. The aim of this study was to determine F1 heterosis and reciprocal effects for weekly body weight in six diallel crosses of Japanese quail. The diallel crosses were produced from Manchurian Gold (MG), Pharaoh (PH) and White (WH) quails. The highest positive heterosis was obtained for hatched weights in all the F1 crosses (0.37 to 9.86%) except for MG x WH. The % heterosis for weekly body weights were generally lower than 5.00% in birds of between 1 to 6 weeks of age. PH x MG had the best heterosis for weekly body weight among the six crosses. The values for maternal effect on weekly body weight were generally negative (-0.31 to -7.42). It is concluded that crossing Manchurian Gold male with White females conferred the best heterotic gains on weekly body weights among the six crosses. The generally negative values obtained for maternal effect requires further investigation to determine the best male and female lines for a crossbreeding program in the studied quail populations.

Key words: Crossbreeding, Heterosis, Manchurian Gold, Maternal effects, Quail

First Plenary Session / 1

Therapeutic Potentials of Aqueous Extract of Piper nigrum whole fruits Against Tramadol-induced Oxidative stress and Inflammation in Rats

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Abstract:

Tramadol is a widely used analgesics. However, prolonged use and high dose of tramadol has been associated with various adverse effects, including oxidative stress and provocation of inflammation. The main purpose of the study was to investigate the potential effects of aqueous extract of Piper nigrum (black pepper) fruits in ameliorating tramadol-induced oxidative stress and inflammation in Wistar rats. The inflammation-induced rats were given oral doses of the extract (250, 500, and 1000 mg/kg body weight) as well as the reference medication (Vitamin C) once daily for 14 days while biochemical parameters were monitored. Secondary metabolites found in the extract include tannins, phenols, flavonoids, saponins, alkaloids and glycosides. In the study, administration of

tramadol significantly (p>0.05) increased the level of TNF-α and reduced IL-1β levels, whereas the reference drug as well as the extract at 250, 500, and 1000 mg/kg significantly (p< 0.05) reversed the levels of TNF-α and IL-1β, thereby attenuating the effects of tramadol. Tramadol also significantly (p< 0.05) decreased the level of reduced glutathione (GSH), superoxide dismutase (SOD) and catalase (CAT) while it increased the level of malondialdehyde (MDA), nitric oxide (NO) and liver and kidney protein. The reference drug as well as the extract significantly (p< 0.05) reversed the levels of MDA, GSH, SOD, CAT, liver and kidney protein thereby reversing the effects of tramadol. These results revealed that the aqueous extracts of P. nigrum whole fruits are rich source of diverse classes of phenolics and have therapeutic potential against oxidative stress and inflammation.

Keywords: Anti-inflammatory agents, Nitric oxide, Oxidative stress, Piper nigrum, Tramadol

First Plenary Session / **84**

Thermal Stability and Catalytic profiles of purified Cucumis melo fruit rind peroxidase

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Abstract

Peroxidases are enzymes that play significant physiological roles and have diverse biotechnological and industrial uses. They facilitate various processes by oxidizing a broad range of substrates using hydrogen peroxide. This versatility has led to their widespread adoption in industrial and biotechnological processes, thus the need for their further exploration of thermally stable peroxidases. The study aimed to investigate the thermal stability potentials of purified peroxidase from Cucumis melo fruit rinds. The yield, specific activity and purification fold of peroxidase isolated from CMFR were determined using standard methods. Peroxidase activity was determined by measuring the rate of oxidation of 2, 2'-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid) (ABTS), pyrogallol and guaiacol in the presence of hydrogen peroxide. The stability profiles of PCMFRP were determined using standard methods. Data obtained were analyzed using descriptive statistics. The findings of the study were that the yield, specific activity and purification fold of PCMFRP was 7.19%, 275.40 μM/min/mg and 1.60, respectively; after 24 hours of incubation, PCMFRP showed optimum activity at pH 8.0 and 50 ℃, with a recovery time of 30 minutes at 80℃; Pb2+, Hg2+, Ni2+ and Co2+ at 10 mM inhibited PCMFRP activity by 18%, 14%, 40% and 26%, respectively while Ca2+ and Cu2+ activated the enzyme in a concentration-dependent manner. The study concluded that Cucumis melo fruit rind is a good source of peroxidase with considerable thermostable characteristics. The study recommended that Cucumis melo fruit rind peroxidase could be explored for industrial and biotechnological applications.

First Plenary Session / **104**

Entrepreneurship Collaboration and Business Sustainability: an Empirical Study of Small and Medium Scale Enterprises in South-West Nigeria

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Abstract

Entrepreneurship collaboration has emerged as a key strategy for enhancing business sustainability among small and medium scale enterprises (SMEs). However, review of literature shows that SMEs in the in South-West Nigeria face various challenges, including limited access to resources, market competition, and regulatory constraints, hindering their completion and sustainability efforts. Collaboration offers SMEs opportunities to overcome these challenges by pooling resources, sharing knowledge, and leveraging synergies with other businesses, thereby enhancing their long-term viability. Given the scarcity of studies on the empirical evidence on the specific dynamics of entrepreneurship collaboration and its impact on business sustainability among SMEs in the region, this study investigates the effect of entrepreneurship collaboration on business sustainability among SMEs in South-West Nigeria.

Using a descriptive research design, primary data were collected through questionnaires from 384 operators of SMEs out of the total 132,749 registered with SMEDAN in the region. The data were then analyzed using multiple regression analysis. Findings revealed that various dimensions of entrepreneurship collaboration such as collaboration networks, resource sharing, collaboration intensity, and knowledge exchange have significant and positive effect on SMEs innovation and adaptability ability ($R2= 0.714$; $\beta = 0.338$; $t=18.566$, $p<0.000$). The study concludes that entrepreneurship collaboration dimensions have significant effect on business sustainability of SMEs. The study recommended the importance of fostering a conducive environment for entrepreneurship collaboration through supportive policies, networking opportunities, and capacity-building initiatives. The empirical findings of the study provide practical implications for policymakers, business support organizations, and SME practitioners in South-West Nigeria and beyond.

Keywords: Collaboration Networks, Resource Sharing, Collaboration Intensity, Knowledge Exchange, Innovation and Adaptability

First Plenary Session / **274**

Revolutionising Sports Sustainability: Harnessing Artificial Intelligence for Creativity

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Abstract :

The journey of the sports industry across the globe towards attaining sustainability, notably in this 21st-century, has been bogged down by multiple challenges. This at the same time create an avenue for everyone in this industry to go back to the fundamentals and come up with creative ideas and technological solutions to salvage the situation. In light of this, this paper presents a comprehensive overview of the potentials that artificial intelligence (AI) have in revolutionising sustainability efforts across various domains of sports if properly harnessed. It expounds on how AI can be used for energy optimisation, carbon footprint reduction, waste management, venue design, athlete performance analysis, fan engagement, and wildlife conservation. By presenting recommendations in areas such as collaborative initiatives, research and development, education and training, creation of enabling policies, and culture change, this paper also provide an eye-opener on how to strategically use AI to achieve sports sustainability.

Keywords: Sports Sustainability, Creativity, Artificial Intelligence (AI)

First Plenary Session / 89

Effect of Citric and Formic Acid Fed Singly and in Combination on Performance and Nutrient Diegestibility of Broiler Chicks

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Abstract

The study was conducted to investigate the effects of replacing antibiotics with citric acid (CA) and formic acid (FA) singly and in combination on performance of broiler chicks. One hundred and eighty (180) day old broiler chicks were allocated into ten (10) dietary treatment groups with three replicates per group comprising six birds each in a factorial design within a completely randomized design. The control and antibiotic growth promoter dietary groups were fed basal diet while the other dietary treatment groups were supplemented with either formic acid at 0% (FA-0), 0.5% (FA-0.5) or 1% (FA-1) or citric acids at 0% (CA-0), 0.5%(CA-0.5) or 1%(CA-1) or combination of formic and citric at 0% of formic acid and 0% citric acid, 0.5% of formic acid and 0.5% citric acid and 1% of formic acid and 1% citric acid. The results showed that addition of formic acid at 0% (FA-0), 0.5% (FA-0.5) or 1% (FA-1) or citric acids at 0% (CA-0), 0.5%(CA-0.5) or 1%(CA-1) or combination of formic and citric acid at different levels in the diet of broilers had a significant difference ($P<0.05$) on the feed conversion ratio and cost benefit of the chickens. Feed conversion ratio was better in 0.5% (FA-0.5) inclusion level. Cost benefit analysis also showed that broilers fed (FA-0.5) had a good cost benefit analysis. It can therefore be inferred that inclusion of formic at 0.5% level in the diet of broilers was found to be beneficial and comparable to the antibiotic fed group.

Keyword: Organic acid, broiler, antibiotics, growth performance

First Plenary Session / 107

Nature, Issues and Response to religious radicalization and violence in Nigeria

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Abstract

This paper investigates the nature of religious radicalization and violence in Nigeria. Utilizing content analysis, it systematically examines data from textbooks, official reports, and academic publications related to religious extremism and violence. Themes, narratives, and patterns associated with radicalization and violence are identified, alongside responses from government agencies. Social identity theory is employed to understand how religious identities, grievances, and group dynamics contribute to radicalization and violence. The analysis uncovers the complexity of factors driving religious radicalization, including socio-economic disparities, political instability, and inter-communal tensions. It highlights the appeal of extremist ideologies in marginalized communities and the exacerbation of conflicts along religious lines. Various responses to radicalization and violence are identified, such as security measures, community engagement initiatives, and interfaith dialogue

efforts. The paper stresses the importance of addressing root causes through socio-economic development and promoting religious tolerance. Additionally, enhancing community policing strategies and strengthening counterterrorism efforts through regional and international cooperation are recommended to effectively combat extremist threats in Nigeria.

Keywords: Issues, Nature, Religious, Religious Radicalization, Violence

First Plenary Session / **19**

Decolonizing Biology Teaching in Nigerian Classrooms Using a Culturally Grounded and Context Specific Approach

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Abstract

As the quest for better ways to present science to the new generation of students continues to occupy the thoughts of science educators across the globe, so will new approaches such as the Culturo-Techno-Contextual Approach (CTCA) continue to emerge in response to this quest. This study explores the potency of CTCA in breaking the barriers to meaningful learning of tissue and supporting system concepts. The explanatory sequential design was employed. A total of 141 secondary school (II) students from two purposively selected schools in Lagos State education district V participated in the study. The Achievement test in Tissue and Supporting System which had a reliability coefficient of 0.80 was the instrument used to collect the quantitative data. Treatment lasted for four weeks after the conduct of the pretest, the experimental group was taught using CTCA and the control group was taught using the traditional lecture method. Four weeks after the posttest, the retention test was conducted. One-way ANCOVA was used to analyse the data. The results showed that each of the CTCA groups outperformed the lecture group on measures of knowledge retention [F(1,100)= 0.00; P< .05]and CTCA had no differential impact on students in the experimental group based on gender (F(1,58)= 0.929; p> .05). Within the limitations of the study, it was concluded that CTCA is a viable teaching approach for promoting meaningful learning of chemistry concepts. Implications of the study were highlighted.

Keywords:

First Plenary Session / **377**

Pharmacognostic, Phytochemical and In-Vitro studies of the Methanol and Chloroform Leaf Extracts of Soursop

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Abstract

Annona muricata is one of the numerous plants that has been frequently mentioned in ethno-medicinal surveys in the management of many ailments. This study was conducted to evaluate the phytochemical constituents, memory enhancing and antidiabetic effects of A. muricata using its chloroform and methanol leaf extracts.
The leaves of A. muricata were dried, powdered and seperately extracted with chloroform and methanol. Chemomicroscopical evaluation of the powdered leaf and qualitative phytochemical analysis of the extracts were carried out following standard procedures. In vitro assays including α-Amylase, α-Glucosidase, protein glycation and anticholinesterase inhibition assays were carried out. All readings were taken in triplicates and the results were expressed as mean values ± standard deviation.
Chemomicroscopical evaluation of the powdered leaf showed that A. muricata contains calcium oxalate crystals, starch, lignin, oils and fat. The phytochemical analysis of both extracts revealed a positive result for the presence of alkaloids, phenols, tannins and sterols. Glycosides were absent in the chloroform leaf extract while fixed oil and fat was absent in the methanol leaf extract. The extracts showed a dose-dependent increase in percentage inhibitions of acetylcholinesterase, α-glucosidase, α-amylase and protein glycation. Assays carried out using methanol extract showed higher activity compared to the chloroform extract.
Evaluation of the phytochemicals, and in-vitro assays of A. muricata methanol and chloroform leaf extract has revealed moderate anticholinesterase activities and glucose lowering inhibition potential towards glucosidase, amylase and protein glycation. Thus, Annona muricata can be enlisted as one of the potential drug leads for the management of Diabetes and Alzheimer's disease.

Keywords: Chemomicroscopy, α-Amylase, α-Glucosidase, Protein glycation and Anticholinesterase

First Plenary Session / 117

Post ASUU Industrial Action and the Academic Performance of Undergraduate Students in a Nigerian University

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Abstract

The education sub-sector in Nigerian universities has witnessed in recent times incessant closure due to industrial actions of the Academic Staff Union of Universities (ASUU). This calls for the assessment of the impact of industrial action on the academic performance of undergraduate students. This study examined the impacts of ASUU Industrial Action on the Academic Performance of undergraduate students in a University in Kwara State, Nigeria. The study adopted a descriptive research design of survey type. The population of the study consisted of all undergraduate students in the Department of Social Sciences Education of the selected university. The target population consisted of 200-level and 300-level Economics Education undergraduates. A sample of 238 was purposively selected. A self-constructed questionnaire on the Impact of ASUU Industrial Action on Academic performance was used for data collection. Cronbach Alpha was used to establish the reliability of the Instrument of which the value stands at 0.81. The data collected were analyzed using percentage, mean and t-test statistics at a 0.05 level of significance. The study revealed that the ASUU industrial action significantly impacted the academic performance of undergraduates positively. The study also found that a significant difference exists in the impact of industrial action on the academic performance of undergraduate students based on CGPA, gender and level. Based on the findings, it was recommended that the Universities should continue to encourage undergraduate students to engage in self-directed learning activities such as group learning and research even if there is no university closure.

Keywords: Academic Performance, ASUU, CGPA, Industrial Action, Kwara State, Undergraduate Students

First Plenary Session / **186**

Computer Based-Test as a Strategy for Forest Preservation (A Case Study of Universities in Ilorin Metropolis)

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Abstract

The study assessed the use of Computer Based Test in Nigerian Universities, taking a case study of Universities within Ilorin metropolis. The stated objectives were to: examine the role of paper usage in environmental degradation by estimating the amount of carbon and methane generated per ton of paper produced and how the adoption of Computer Based Test (CBT) has helped to fill the gap; and to examine the perception of students on Computer Based Test. Data was collected using direct administration of questionnaire through stratified sampling techniques and from Joint Admission Matriculation Board (JAMB) to estimate the number of students who sat for Post UTME between 2014 and 2023. The study sampled a total of 400 students; representing 0.49% of the total population of University of Ilorin, Kwara State University and Al-Hikmah University. Frequency, simple percentage and correlation was used to present and discuss results of the finding. The results of the findings show that there is a significant relationship between demographic characteristics and computer literacy level of undergraduate students. Furthermore, there is a significant relationship between computer literacy level of students and their performance in computer-based examinations; where r=0.8. The results of the findings also shows that the use of Computer Based Test for JAMB UTME examination in 2014 and 2023 conserved about 66,750,168 sheets of paper (equivalence of 8,010.75 trees) and prevented the release of over 825,107.25kg of carbon in ten years. The study concludes that computer-based test is a positive development to the education system and to environmental sustainability and recommends that institutions should adopt the technology of Computer Based Test to reduce paper usage.

Keywords: Computer Based Test, Climate Change, Computer literacy, Environmental Management.

First Plenary Session / **379**

Evaluating Urban Tree Diversity and the "10-20-30"Rule of Urban Forestry: Case Study of Ilorin Metropolis, Nigeria

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ABSTRACT
Urban forests comprising trees in streets, parks, and other urban settings, provide essential ecological, economic, and social benefits. The "10-20-30"rule of urban forestry is a guideline to promote

tree species diversity and enhance the resilience of urban forests. This study therefore evaluates urban tree diversity in Ilorin metropolis, Nigeria, with a focus on adherence to the "10-20-30" rule. This research employed a systematic survey of urban tree species across various central areas in Ilorin covering about 20% of Ilorin's landmass. Tree species were identified to species level. Results were analyzed using descriptive statistics, Shannon-Wiener's index, and Margalef's index to assess diversity and species richness. The results revealed high species diversity, with the Fabaceae family being the most represented. Notable species include Albizia lebbeck, Ficus macrocarpa and Polyalthia longifolia. The Shannon-Wiener index of 3.88 and Margalef's index of 10.5 indicate significant species diversity and richness. The study confirmed compliance with the "10-20-30"rule, as no single species (Polyalthia longifolia = 8.40%, Azadirachta indica = 6.36%, Ficus macrocarpa = 5.80%), genus (Ficus = 14.85%, Terminalia = 8.84%, Polyalthia = 8.40%) or family (Fabaceae = 21.71%, Moraceae = 15.01%, Annonaceae = 11.35%) exceeded the thresholds. These findings highlight the importance of diverse urban forests in enhancing urban resilience and sustainability, offering valuable insights for policymakers and urban planners to improve urban forestry management in developing cities.
Keywords: "10-20-30"rule of urban forestry, fabaceae, species; genus, species diversity

First Plenary Session / **40**

Statistics and Data: A viable nexus initiative for Sustainable future of universities and Industries

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Abstract:

The study investigates the impacts of Statistical methodology and Data on the future sustainability of universities and industries based on the goals 4 (Quality education) and goal 9 (industry, innovation and infrastructure) of sustainable development goals. In the contemporary landscape of academia and industry, the synergy between universities and industries is indispensable for fostering sustainable development. This paper explores the pivotal role of statistics and data in enhancing the sustainability future of both the universities and industries. By harnessing statistical methodologies and leveraging on viable data, universities and industries can collaborate more effectively in addressing societal challenges, optimizing resource utilization, and fostering innovation. The study adopts partial least squares to examine the impact of Statistics and viable Data on the future sustainability of universities and industries. The paper highlights the transformative potential of statistical insights in guiding evidence-based decision-making, enhancing operational efficiency, and driving sustainable practices in both academic and industrial domains. A sample size of 150 respondents across KU8 and industries will be selected for the studies, sustainable development goals 4 and 9 which state the inclusion of both universities education and industry innovation and infrastructure will be examine. The study will focus on the importance of interdisciplinary collaboration, capacity building, and ethical considerations in maximizing the impact of statistical approaches for sustainable development.

First Plenary Session / **113**

Community Engagement and Service Learning: A panacea for the Poor Performance in Secondary School Mathematics

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Abstract

This study examines the impact of community engagement and service learning on the poor performance in secondary school mathematics using a mixed-method approach. The research was conducted across various schools in Kwara State, Nigeria, and involved both quantitative and qualitative data collection methods. The quantitative portion consisted of administering standardized tests and surveys to 300 students to assess changes in mathematical performance and attitudes following community engagement initiatives. The qualitative portion included conducting focus group discussions and interviews with 20 teachers and community members to gain insights into the effects of service learning on students' understanding and application of mathematical concepts. The findings indicate that incorporating community engagement and service learning into the mathematics curriculum has a positive impact on students' performance and interest in the subject. Students who participated in community-based projects demonstrated improved test scores, problem-solving skills, and a stronger connection between classroom learning and real-world applications. The study suggests that integrating service learning and community engagement in mathematics education can be a viable strategy to address poor performance and enhance students' overall learning experience.

Keywords: Community Engagement, Service Learning, Mathematics Education, Student Performance

First Plenary Session / **222**

The Impact of Psychology in Nigerian Society, Culture And Industry: a Call for Reform.

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Abstract

Psychology has become a strong thread woven into the fabric of western society. Yet, in recent times, the origin of psychological research has been questioned, with calls to decolonise the curriculum due to the imposition of Eurocentric views. This means that non-western societies must take responsibility for reshaping their philosophies and reconstructing fundamental psychological beliefs. However, Nigeria continues to overlook the power of Psychology in shaping society. With less funding and shortages in professional training, Psychology is still undervalued and misunderstood. The purpose of this paper is to develop a psychological framework that highlights the impact of psychology in Nigerian society, culture and industry. This three-pronged approach will create a more holistic understanding of psychological wellbeing and illuminate opportunities to develop culturally appropriate interventions. A systematic review is conducted using the following databases: Web of Science, Scopus, Psych Info, PubMed and AJOL. Key themes are identified, showcasing the interplay between psychological wellbeing and Nigerian society, culture and industry. A Nigerian psychological framework is presented to determine contributors to psychological wellbeing and psychological difficulty. In conclusion, this paper provides a psychological framework that depicts the impact of mental health difficulties in Nigerian contexts. A prominent feature is understanding how psychology applies to this complex and diverse nation, while highlighting areas that must be reconstructed to strengthen the mental health capacity of Nigerians.

Keywords: Nigeria; Psychology; Mental Health; Humanities; Industry-Linkage

First Plenary Session / 224

Development of Facial Recognition-Based Toddler's Emotion Prediction System

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ABSTRACT

Toddler's emotion is a set of expressions; facial or verbal ranging differently in toddlers, these expressions are usually determined by the environment. However, inability to detect and predict change in toddler's emotion lead to late intervention in toddler's development resulting to a negative impact on the mental and social development. To proffer a long-term solution to this problem, the study developed a facial recognition-based toddler's emotion prediction system. The system's model is developed using random forest algorithm and trained with the features extracted from the Toddler's happy and sad facial dataset of 2168 image sample size. Feature extraction of the images is done using Mediapipe machine learning algorithm. The model was integrated into a designed user interface for ease of use. The interface captures the toddler'face image and make emotion predictions based on happy or sad. In conclusion, the developed facial recognition-based toddler's emotion prediction model performs excellently with an accuracy score of 84%.

Keywords: Emotion Prediction, Facial Recognition, Mediapipe, Random Forest Algorithm, Toddler Emotions.

First Plenary Session / 174

Sustainable Education in the Digital Age: Leveraging Technological Advancements

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Abstract

The deliberate and planned integration of digital tools, resources, and practices into teaching and learning with the goal of fostering environmental sustainability, social responsibility, and economic viability is known as technology integration for sustainable education. However, it entails utilizing technology in a way that advances sustainable development's overarching objectives while simultaneously improving educational outcomes. In this study, however, 250 lecturers in Kwara State, Nigeria, were sampled. The study assessed the perceptions, levels of use, and difficulties faced by lecturers when integrating technology into their methods of instruction. Data was gathered using a standardized survey questionnaire and descriptive analysis was performed. The majority of lecturers acknowledge the value of technology in improving student performance, according to the findings, more than 80% of them say they would be happy to include it into their lessons. However, major obstacles like restricted access to technological infrastructure, inadequate training, and

opposition to change impede the successful integration of technology in education. The study emphasizes the necessity of focused interventions to remove these obstacles and assist instructors in utilizing technology to advance sustainable education in the era of digitalization. Suggestions encompass offering all-inclusive training courses, enhancing facilities, and cultivating an innovative and cooperative culture at academic institutions.

Keywords: Technological advancements, Sustainable education, Lecturers, Integration

First Plenary Session / **398**

Gendered Language of Selected Fourth Generation Love Poems in Nigeria: A Feminist Investigation

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Abstract

This research focuses on gendered language of the selected fourth generation love poems in Nigeria. It is primarily aimed at investigating how sexism is stereotyped through language use of the selected works of the male poets. In carrying out this research, the works of three-male poet personas and two of the female poet-personas are randomly analysed using feminist stylistic model of Sara Mills (the three part model) as an interpretative method to the analysis of gendered language identified in the selected works of the male-poet personas that stereotype women. The analysis carried out on the selected poems reveals that men use of language engenders and stereotypes women. Based on the findings, it is recommended that Feminist studies should be carried out towards how women especially female writers will reshape the stereotypical construction of women in Nigerian Poetry tradition.

Keywords: Sexism, Stereotype, Gender, Maginalisation

First Plenary Session / **123**

Factors Influencing Contraceptive Methods among in School Teenage Girls in Ilorin South Kwara State

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Abstract

The study sought to examine the factors influencing contraceptive methods among school teenage girls in Ilorin South Local Government Area Kwara State, Nigeria. Preventing unintended pregnancy is essential to improving adolescents'sexual and reproductive health and their social and economic well-being. Therefore, the study was guided with the solely aim to examine the factors influencing contraceptive methods among school teenage girls in Ilorin South Local Government Area of Kwara State, Nigeria. Literature review was undertaken in order to provide a bridge and clear understanding of existing knowledge base in problem area. The researcher draws upon mostly primary sources including interviews, questionnaires for data collection and the interpretation of these data collected

in a tabular form to show a clear-cut agreement and disagreement. A descriptive survey was used to undertake study. The population of the Study includes the approximate total number of all the In-School teenage girls in Ilorin south LGA of Kwara state. Using Yaroyamane (1973) techniques, a total number of 200 respondents was drawn from the study population for data collection. Some research instruments were developed to aid the researcher administrated to the respondent's base on the research location (Ilorin-South local government area of Kwara State). Data interpretation was made as well as discussion based on data interpretation and conclusion was drawn with references for further finding, reading and research.

First Plenary Session / **225**

An Assessment of the Activities of the Vigilante Group of Nigeria in Kwara Central, Kwara State

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Abstract

The situation of insecurity in Nigeria has given rise to non-governmental security organizations such as the Vigilante Group of Nigeria (VGN). While these groups may offer some benefits by leveraging their understanding of local communities and being more responsive to their needs, their operations also raise complex concerns. This study assessed the efficiency of the Vigilante Group of Nigeria' s operations and activities in Kwara Central, Kwara State. The study relied on the Social Control Theory which notes that the society has the capacity to institute and maintain social norms and values for regulating and controlling people's behaviors. Mixed method research design was adopted by combining qualitative (interview) and quantitative (questionnaire) approach in data collection. Also, purposive sampling technique was used to select a total of 410 respondents that participated in this study (questionnaire = 400, interview=10). Quantitative data was analyzed using descriptive statistics and inferential statistics and the qualitative data was analyzed using content analysis. Findings show that while collaborating with traditional rulers, community members and other security agencies, Vigilante Group of Nigeria plays crucial roles in securing Kwara Central by providing security to rural and urban communities. However, lack of legal backup, funding and training are parts of the challenges hindering their activities. This study concludes that the VGN's activities are efficient in reducing crime in Kwara Central and recommends that government should provide the necessary support in the areas of constitutional recognition, professional training and funding to further strengthen the operations of the Group.

First Plenary Session / **307**

Open Access awareness and advocacy for Researchers

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Abstract:

The prevalent notion of physical space coexistence rather than virtual knowledge exchange in African is becoming outdated thus there is a call for action to support unrestricted access to information and knowledge dissemination. Open access has transformed modern research, enabling widespread knowledge dissemination and fostering innovation. Yet some are unaware of its practices and benefits. This paper presents report on open access awareness project conducted at Summit University, Offa, Kwara State, Nigeria. The project aimed to democratize open access culture among researchers, develop and validate an institutional open access policy and a public online repository to curate institutional research. Using a mixed method approach combining workshop and survey, over 70 researchers participated in the event held on 3rd of February, 2024. Key findings revealed that 20. 8 % of the participants were unaware of open access before attending the event. Gaining insight on open access practices was rated high as the goal of attending the workshop by 48% of the participants. Among the themes under Open access practices, the Open access publishing was rated highest as the aspect to gain insight on with 63.6%. Thus, showing that participants will like to know more about the open access publishing. Finding further revealed institutional support and cost of publishing was rated high as a barrier to adopting open access, post-event. The research team acknowledges the generous support of the funder, Open Research Funders Group (ORFG). Their support was instrumental in the successful implementation of the awareness and advocacy program on open access.

Keywords: Awareness and advocacy, Knowledge Dissemination, Open Access

First Plenary Session / **391**

HIV/AIDS information sources and safe-sex practices among artisans in Ilorin, Kwara State, Nigeria

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Abstract

This study investigated HIV/AIDS information sources and safe-sex practices among artisans in Ilorin metropolis. Two research questions guided the study. Information Processing Theory was used to underpin the study. A descriptive research design was adopted for the study. A well-structured interview guide was used to collect data from 12 executive members of artisans in Ilorin metropolis with questionnaire used to obtain data from 360 artisans in Ilorin metropolis. The data collected were computer-analysed, using Statistical Package for Social Sciences (SPSS) software version 23 while other data gathered through interview sessions were qualitatively analysed and used to complement findings from the quantitative data. Presentation of the quantitative data was done using frequency tables and percentages. The study found among others that, artisans have a high level of awareness about HIV/AIDS and safe sex; and that, the preferred information sources of artisans in Ilorin metropolis about HIV/AIDS and safe-sex practices were radio, television and social media. The study, therefore recommended among others, that, to achieve the vision 2030 (Goal 3, target 3.2) of the Sustainable Development Goal on ending HIV/AIDS as projected by WHO, the Federal and State Ministries of health and other stakeholders in HIV/AIDS containment should intensify health awareness campaigns' efforts with special interest on HIV/AIDS containment and safe-sex practices through the use of appropriate information sources of the target audience.

Keywords: Health communication, HIV/AIDS, Information sources, Safe-sex practices, Artisans

First Plenary Session / 396

Psychological Factors Predicting Entrepreneurship Intention among Undergraduates in Kwara State, Nigeria

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Abstract

Entrepreneurship has been recognized as a driving force for economic growth and development in developed and developing economies of the world. Entrepreneurship intention is the mindset and commitment of an individual to start and run his or her own business.This study examined psychologicalfactors (self-efficacy and locus of control) as predictors of entrepreneurship intention among undergraduates in Kwara State. The study adopted descriptive research design of correlational type while purposive sampling technique was used to select three universities in Kwara State. Data were collected from 150 participants using validated questionnaires. Data collected were analysed to test four hypotheses. The result showed significant relationship between psychological factors and entrepreneurship interest. Also, the result indicated that psychological factors (self-efficacy and locus of control) jointly predicted entrepreneurship intention. The study concluded that psychological factors (self-efficacy and locus of control) were strong predictors of entrepreneurship intention among undergraduates in Kwara State. It is recommended that university decision-makers should employ trained psychologists to develop self-efficacy and appropriate locus of control orientation programmes which invariably would boost undergraduates having a favourable intention of starting their own business

Key Words: Entrepreneurship Intention, Self-Efficacy and Locus of Control

First Plenary Session / 321

The Impact of Work-Family Conflict on the Mental Stability of Married Women in Kwara State, Nigeria: A Quantitative Study

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Abstract:

This study proposes to investigate the relationship between work-family conflict and the mental stability of married women in Kwara State, Nigeria. The intersection of work and family responsibilities presents unique challenges for married women, particularly in contexts where traditional gender roles and societal expectations may exacerbate conflicts between these domains. Using a quantitative approach, data will be collected from a sample of married women residing in Kwara State through structured surveys. The surveys will assess the levels of work-family conflict experienced

by participants, their perceived mental stability, and demographic factors such as age, educational attainment, employment status, and marital satisfaction. Statistical analyses, including correlation and regression techniques, will be employed to examine the association between work-family conflict and mental stability while controlling for relevant covariates. Additionally, exploratory analyses will explore potential moderators and mediators of this relationship. Findings from this study will contribute to our understanding of the psychosocial factors influencing the mental well-being of married women in Nigeria, with implications for both research and practice. Identifying the mechanisms through which work-family conflict impacts mental stability can inform the development of targeted interventions aimed at alleviating stressors and promoting resilience among married women in Kwara State and similar settings.

Keywords: Married women, mental stability, work-family conflict

First Plenary Session / **331**

Islam and Inter-Faith Dialogue: A Shapping Tool for Sustainable Future

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Abstract:

Religious conflicts leading to crises are one if not the peak of all the factors causing insecurity in Nigeria. The relation between the two major religions in Nigeria; Christianity and Islam, has been shaking the peace and security of the country to its root leading to unrest of mind for people and rendering Nigeria as an unconducive atmosphere for living, working, learning and even worship. Thus, the sustainability of the future is very important and indispensable for national development. Therefore, this paper aims at examining the extent at which Islam can co-exist with other faiths especially Christianity for sustainable future. The methods adopt by this paper are historical and descriptive methods of research. Historical method assists in the historical account of the religious conflicts and crises in Nigeria while descriptive method helps in explaining the importance of inter-faith dialogue and its modus operandi for sustainable future in Nigeria. The paper reveals that the insecurity of lives and properties in the country as a result of religious crises is due to improper understanding and zero tolerance of the adherents of religions in Nigeria. The paper, therefore, advocate a sincere and unbiased fora for inter-faith dialogue to ameliorate religious crises leading to insecurity of both human and material resources with a view to achieving sustainable future.

Key words: Islam, Christianity, Dialogue, Inter-faith, Sustainability

First Plenary Session / **350**

Artificial Intelligence Utilization as a Tool for Sustainable Management of Nigerian Universities

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ABSTRACT:

Artificial Intelligence (AI) is a set of technologies focused on creating systems capable of performing tasks that typically require human intelligence. These tasks include learning, reasoning, problem-solving, perception, language understanding and decision-making. This paper examines the potentials of Artificial Intelligence (AI) as a strategic tool for fostering sustainable management of the varied aspects of Nigerian universities. As institutions of higher learning face various challenges, including financial constraints, resource inefficiencies, teaching and assessment ineffectiveness and the need for enhanced educational quality, AI offers innovative solutions to these pressing issues. The various AI applications, such as predictive analytics for student enrollment and retention, intelligent resource allocation, and automated administrative processes are explored. By integrating AI-driven technologies, universities can optimize their operations, reduce costs and improve decision-making processes. It was observed that AI enhances operation efficiency, supports sustainable practices and fosters a more responsive educational environment. However, the paper also identifies barriers to AI adoption, such as infrastructure deficits, funding limitations and the need for skilled operational personnel among others. Suggestions are provided to address these challenges and promote the broader adoption of AI in the management of Universities in Nigeria.

Keywords: Artificial Intelligence, Sustainable management, Nigeria, Universities

First Plenary Session / **393**

Assessment of Mineralization Potential in Pategi (Sheet 204), North-central Nigeria from Aeromagnetic Perspective

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Abstract

This work investigates the mineralization potentials of areas that are represented on Patigi (Sheet 204), Northcentral Nigeria from aeromagnetic survey. It aims at identification of the structures responsible for the rich mineralization of the area. Enhancement techniques like RTE, Upward continuation, Total Horizontal Gradient, Grid Analysis, Tilt Angle derivative and Euler deconvolution are used to provide an indirect insight into subsurface geologic features and also to understand the magnetic signature of the subsurface geologic lineaments using Oasis Montaj™ software. The results of the analyses showed that there is a relatively high magnetic anomaly in the northwest. Maximum peak from the total horizontal derivative (THD) trends in NE-SW essentially. The trend of the lineaments/ fractures is dominant in the NW-SE direction, conforms with the trends obtained for basement structures in previous studies. The trends of the lineaments/ fractures were likely established during the Pan-African orogeny. Depth range produced by 3D Euler deconvolution is from 500 - 2500 m for all the lineaments. This gives an insight of approximate depth range of all the lineaments/ fractures across the whole map in the study area. It was concluded that the western part of the area is more mineralized in industrial minerals and commonly associated with gemstones that should be explored. This part of the area is also inferred to be more mineralized in metallic deposits such as gold because of the density of fractures in this area.

Keywords; Mineralization, Euler Deconvolution, Structures, Aeromagnetic Survey.

First Plenary Session / **52**

Artificial Intelligence: Ethical and Social Implications in Higher Education

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Abstract

The growing integration of Artificial Intelligence (AI) in higher education institutions raises several ethical and societal issues that need to be carefully considered. This article investigates and evaluates the complex effects of integrating AI into higher education. It seeks to understand the potential benefits and challenges that AI brings to educational settings, focusing on its impact on students, educators, and institutional policies. A mixed-methods approach was employed, combining a comprehensive literature review with qualitative interviews and surveys. The literature review covered recent academic articles, reports, and case studies on AI in higher education. Interviews and surveys were conducted with educators, students, and administrators from various higher education institutions to gather firsthand insights and experiences. The findings reveal that AI can significantly enhance learning experiences through personalized education, efficient administrative processes, and improved access to resources. However, concerns were identified regarding data privacy, algorithmic bias, and the potential for reduced human interaction. The study also highlighted the need for robust ethical guidelines and policies to govern AI use in education. AI holds transformative potential for higher education but must be implemented thoughtfully to address ethical and social challenges. Institutions should prioritize transparency, inclusivity, and fairness in AI applications. Additionally, ongoing dialogue among stakeholders is essential to develop ethical frameworks that ensure AI benefits are maximized while minimizing risks.

Keywords:

First Plenary Session / **4**

Perceptions And Practices Of Interfaith Communication In Fostering Social Harmony Within Ilorin South Local Government Area Of Kwara State

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Abstract

This paper investigates the perceptions and practices of interfaith communication in fostering social harmony within Ilorin South Local Government Area of Kwara State, Nigeria. Interfaith communication, otherwise known as 'Interfaith Dialogue', refers to the positive and cooperative interaction between people of different religions, faiths or spiritual beliefs, with the aim of promoting understanding amongst them, as well as to increase acceptance and tolerance. The dynamics of interfaith dialogue play a pivotal role in shaping communal relationships and promoting peaceful coexistence. By extracting data from structured questionnaires and semi-structured interviews –quantitative and

qualitative sources respectively, this paper examines the extent of interfaith engagement and interaction among religious communities in Ilorin South, identifies the key facilitators and barriers to effective interfaith communication within the local context, assesses the prevailing attitudes and perceptions of residents towards interfaith communication, and explores the impact of interfaith communication on perceptions of religious tolerance, mutual respect, and trust among individuals from different faith backgrounds within Ilorin South. The paper further generates recommendations for enhancing interfaith communication strategies and fostering greater social cohesion and peaceful coexistence within Ilorin South Local Government Area and similar multicultural contexts and settings. Ultimately, this paper contributes to the broader discourse on conflict resolution, religious pluralism, and community development in diverse societies.

Keywords: Interfaith communication, Social harmony, Perceptions, Peaceful coexistence

First Plenary Session / **125**

Prevalence of Ascaris Lumbricoides and Hookworm among Primary School Pupils in Ilorin

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Abstract
Urinary tract infection (UTI) is a common infection associated with mostly (95%) bacterial infection in the genitourinary tract. This study was aimed at determining the prevalence of urinary tract infections among female students in Al-Hikmah University, Ilorin, Kwara State between February and April, 2023. A total of 230 female students in Al-Hikmah University between the ages 15-34 were selected randomly from old hostel, international hostel and off campus in Al-Hikmah University Ilorin. Clean catch mid-stream urine specimen was collected from each participant and cultured. Antibiotic susceptibility testing was carried out. Statistical analysis was carried out using SPSS 25 and p-value was set at $p < 0.05$. Out of the 230 female Al-Hikmah students, 35 (15.2%) were symptomatic for UTI, while 195 (84.8%) were asymptomatic. Significant bacteria were isolated in 64 (27.8%) female students in which 29 (45.3 %) were from the students living in general hostel, 15 (23.4 %) from international hostel and 20 (31.3%) from off campus students. The common bacterial isolates were Staphylococcus aureus 22/64 (34.4%), followed by coagulase negative staphylococcus sp 15/64 (23.5%), Klebsiella pneumoniae 14/64 (21.9%), Escherichia coli 11/64 (17.1%) and Enterococcus sp 2/64 (3.1%). Gram-negative isolates showed high resistance rate of 52% to chloramphenicol, 44% to amoxicillin-clavulanic acid and 32% to gentamycin while Gram-positive isolates showed high resistance rate of 48.7% to amoxicillin-clavulanic acid and 35.8% to ceftriaxone. The Gram-negative isolates showed high susceptibility rate of 92% to nitrofurantoin while the Gram-positive isolates showed high susceptibility rate of 97.4%. The overall prevalence of 27.8% of UTI among female students was significant, indicating a health problem in the institution which may be associated with poor hygiene practices. It is necessary to create awareness about health education and personal hygiene in the institution to minimize the incidence of infections among the students.
Keywords: Ascaris lumbricoides, Hookworm, infections, primary school, pupils

Second Plenary / **419**

Enhancing Economic Resilience: Entrepreneurship Skills Development for Physics Teachers in Nigeria

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Abstract
In response to Nigeria's high unemployment rate, this study focuses on equipping physics teachers in Kwara State with entrepreneurship skills to tackle economic challenges such as unemployment and poverty. The research employed a quantitative approach, utilizing questionnaires and statistical analysis tools to collect and interpret data from physics teachers across five local government areas in Kwara State. The study sample included 100 secondary schools (10 public and private schools in each of the five local governments). Four research questions and four null hypotheses guided the investigation. Data collection involved closed-ended questionnaires, which were validated by three lecturers from the Department of Science Education at the University of Ilorin. Reliability testing using Cronbach's Alpha formula yielded a reliability coefficient of 0.86. The data were analyzed using mean, frequency, and percentages. Findings indicate that entrepreneurship education significantly contributes to reducing economic hardship, enhancing workplace flexibility, and improving social security for physics teachers. Interestingly, the length of teaching experience does not significantly impact perceptions of poverty and violence reduction. Recommendations include integrating entrepreneurship training into science education curricula to empower teachers for self-reliance and economic independence. By bridging the gap between pedagogical knowledge and entrepreneurship skills, this study aims to contribute to a more sustainable and prosperous future for physics teachers in Nigeria. This research underscores the importance of equipping educators with entrepreneurial skills, ultimately fostering economic resilience and self-sufficiency among physics teachers in Nigeria
Keywords: Unemployment, Entrepreneurship, Poverty, Pedagogical knowledge, Physics Teachers.

Second Plenary / 423

Artificial Intelligence's Influence on Undergraduates' Cybersecurity Awareness for Education Privacy, Fraud Prevention, and Data Protection

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Abstract
This study investigates how artificial intelligence (AI) affects undergraduates' cybersecurity awareness concerning education privacy, fraud prevention, and data protection. A sample of 200 students from diverse academic backgrounds was surveyed. The research utilized a structured questionnaire covering variables such as AI integration, cybersecurity knowledge, privacy concerns, fraud experiences, and data protection measures. Descriptive statistics, correlation analysis, and regression models were employed to analyze the data. Results reveal a significant positive correlation between AI utilization and cybersecurity awareness ($r = 0.70$, $p < 0.001$). Participants showed heightened concerns regarding education privacy ($M = 4.25$, $SD = 0.67$), with AI being perceived as a potential solution ($M = 4.60$, $SD = 0.52$). Fraud incidents were reported by 35% of respondents, indicating the importance of robust prevention measures. Moreover, data encryption emerged as the most favored protection mechanism. The study concludes that AI plays a pivotal role in enhancing undergraduates' cybersecurity awareness, particularly in education settings. Recommendations include

integrating AI-driven cybersecurity education programs into university curricula and implementing advanced fraud detection systems. Additionally, enhancing data encryption protocols is vital for safeguarding sensitive information in academic institutions.

Keywords: Artificial Intelligence; Cybersecurity Awareness; Education Privacy; Fraud Prevention; Data Protection.

Second Plenary / **387**

Enhancing Secondary School Students' Academic Performance: The Role of Artificial Intelligence in Addressing Challenges of Growing Class Sizes

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Abstract

This study examines the potential of artificial intelligence (AI) in enhancing secondary school students' academic performance amidst increasing class sizes in Ilorin South Local Government Area of Kwara State, Nigeria. The primary objectives were to assess the impact of AI-driven educational tools on students' learning outcomes and to determine the feasibility of integrating such technologies in overcrowded classrooms. A mixed-method research design was employed, incorporating both quantitative and qualitative approaches. The sample size comprised 300 students from five secondary schools experiencing significant class size growth. Quantitative data were collected through standardized test scores before and after the introduction of AI tools, while qualitative insights were gathered via student and teacher interviews. The AI tool used was personalized learning platforms. Findings indicated a notable improvement in students' academic performance, with an average increase of 15% in test scores post-intervention. Additionally, students reported heightened engagement and motivation, and teachers observed more efficient classroom management and individualized attention. The study concludes that AI has substantial potential to mitigate the adverse effects of growing class sizes on academic performance. It is recommended that educational policymakers consider the integration of AI technologies in secondary schools to support teachers and enhance student learning outcomes. Further research is suggested to explore long-term effects and the scalability of such interventions across diverse educational contexts.

Keywords: Artificial Intelligence, Academic Performance, Secondary Education, Class Size, Educational Technology

Second Plenary / **422**

Assessment of the Implication of Energy Poverty on Farming Households' Welfare In Nigeria

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Abstract
Energy must be affordable and clean for everyone to achieve sustainable development. Energy poverty is a household's inability to get social and economic access to the required energy at home. Sub-Saharan Africa (SSA) is the world's most energy-poor area; in 2016, half of its people lacked access to power. Approximately 40% of Nigerians live without access to such a power grid, while more than 70% still cook using traditional bioenergy. However, the energy poverty implications for farming households' welfare in terms of expenditure remain unexplored in the literature. This study estimates the incidence of energy poverty, and examines the welfare impacts of energy poverty among farming households in Nigeria. The study used Living Standard Measurement Study (LSMS) data collected in 2015/2016 and 2018/2019 waves nationwide by the National Bureau of Statistics (NBS), Nigeria. We used the Multidimensional Energy Poverty Index (MEPI), Ordinary Least Square (OLS) regression model and quantile regression (QR). Energy poverty negatively impacts household welfare (-76348.475) at p<0.01; it negatively affects households at the bottom of first quantile (-20152.33) at p<.1, second quantile (-50563.78) at p<0.01 and third quantile (-112529.8) at p<0.01 expenditure distributions. Policymakers must recognise households with inadequate energy consumption to satisfy their fundamental needs and improve their general welfare; after identifying them, proper energy strategy must aim at assisting them in having an adequate energy supply. The policy needs to incorporate off-grid energy sources to make energy more accessible.
Keywords: Energy poverty, MEPI, Quantile regression, Household welfare

Second Plenary / 237

Embedding Facial Recognition Authentication Mode in Web Based Attendance Application

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ABSTRACT

Student's attendance in higher educational institutions traditionally relied on traditional methods such as counting, signature, tallying which have proven to be inefficient and errors prone in differentiating attendees if impersonated. However, this has caused inaccuracy, impersonation and manipulation during attendance automation. To address these challenges, this study developed a web-based attendance application with an authentication mode of facial recognition. The application was built using a combination of Nextjs, firebase, TensorFlow and a highly efficient Facial API with an accuracy of 95%. The application's is developed to capture user's facial image and match with pre-registered images in the database for attendance automation. A centralized database for keeping up-to-date attendance records is embedded in the application. This application has transform how institutions track and manage classroom attendance, contributing to a more organized and effective learning environment.

Keywords: Centralized database, Facial recognition, Manual attendance, User testing.

Second Plenary / 330

The Impact of Social Media on Electoral Behaviour in Nigeria's 2023 General Elections

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ABSTRACT:

The advent of social medial has revolutionized political communication and participation globally and Nigeria's 2023 general election serves as a relevant case study to examine its impact on political behaviour. This study investigates the multifaceted influence of social media platforms such as Twitter, Facebook and WhatsApp on voters'attitude, perceptions and decision-making processes during the electoral cycle. The objectives were to:(i) analyze the extent to which other various factors have influenced the electorates behaviour in 2023 general election. (ii) investigate the impact of social media in shaping political perceptions and attitudes of voters in the 2023 general election. (iii) critically examine the credibility of political information and misinformation across different social medial platforms during Nigeria's 2023 presidential election. The study employed a mixed-methods technique, which integrates both quantitative and qualitative data for collection and analysis. The research methodology adopted was mixed method and three hundred and eighty-four (384) was used as the sample size for questionnaire. The data collected were gathered and analyzed with statistical method indicating frequencies and percentages (SPSS). Findings from the study revealed that social media influenced voter's behaviour because it has ability to penetrate in an individual's bedrooms. Finally, the study therefore recommends that social media can be used to encourage youth participation in electoral processes, online registration, educate candidates and campaign staff. By implementing these recommendations Nigeria's can harness the potential of social medial to promote informed decision-making and strengthen democratic governance in future elections.

Key words: Social Media Electorates, Participation, Communication, Election

Second Plenary / 239

Development of Ai Chatbot for Student Registration

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DEVELOPMENT OF AI CHATBOT FOR STUDENT REGISTRATION
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Abstract:

In recent years, AI chatbots computer programs designed to copy and imitate human way of conversing, play a role in improving user experience across many applications, including customer service and information gathering. This study deals with the development and evaluation of a chatbot system made for assisting students with university registration processes. The different types of chatbots are presented, such as rule-based, retrieval-based, and generative chatbots, sketching out their features and the possibilities for applying them. Drawing on the background of the study, that considers the need for prompt and facile registration procedures in universities, the project is designed to tackle the issue of lack of clarity for students who have to wade through complicated registration procedures. Accordingly, the problem statement will be the need to create a system of a

user-friendly, effective, and readily available chatbot that could provide student support throughout all the levels of their registration ship by answering the registered questions. As a consequence, the burden of work on registration administrators should be lessened. The project's aim and objectives will be to develop a chatbot with the usage of AI and ML techniques to assist with registration and to answer student questions. Utilizing NLTK in Python and Multilayer Perceptron for intent classification and response generation, as well as pattern matching techniques, responses to the question will be generated and classified as right. Project consists of data preprocessing, training and testing the model with the help of confusion matrix to analyze the accuracy of the Chatbot and integration of the chatbot into the website of university in order to improve the website of university. The proposed Chatbot system aims to educate the future students with the help of advanced AI techniques and engage students in the process of admission by implementing in their admissions process.

Second Plenary / **355**

Navigating Capital Access: Exploring Funding Innovations for Start-Up Incubation In The Digital Era

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Abstract
In the contemporary entrepreneurial landscape, characterized by rapid technological advancements and evolving market dynamics, accessing capital remains a critical challenge for start-up ventures. This paper delves into the realm of funding innovations tailored for start-up incubation within the digital era. Through a comprehensive review of literature and empirical analysis, it examines the shifting paradigms in capital acquisition strategies, exploring novel approaches and emerging trends that cater to the unique needs of start-ups in today's digital environment. Drawing upon insights from venture capital, crowdfunding, angel investment, and other alternative funding mechanisms, this study identifies key drivers and inhibitors shaping capital access for start-up incubation. It highlights the transformative impact of digital platforms and technologies on traditional funding models, emphasizing the role of online platforms, blockchain, and artificial intelligence in streamlining the fundraising process and expanding investment opportunities for aspiring entrepreneurs. Furthermore, this paper evaluates the implications of funding innovations on start-up success rates, scalability, and long-term sustainability. It discusses the importance of strategic partnerships, mentorship networks, and ecosystem support in leveraging funding innovations to foster innovation and growth within start-up incubation programs. By shedding light on the evolving landscape of capital access in the digital era, this paper provides valuable insights for policymakers, investors, incubator managers, and aspiring entrepreneurs seeking to navigate the complex terrain of start-up funding. Ultimately, it underscores the imperative of embracing innovative funding approaches to fuel entrepreneurship and drive economic prosperity in an increasingly digitalized world.
Keywords: Entrepreneurship; Capital access; Funding innovations; Digital platforms; Economic prosperity

Second Plenary / **389**

The Role of Artificial Intelligence in Transforming Art Education: Opportunities and Challenges

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Abstract

The integration of Artificial Intelligence (AI) in art education represents a transformative shift with profound implications for both teaching methodologies and learning outcomes. This position paper examines the opportunities and challenges presented by AI in the context of art education. AI-driven tools offer unprecedented opportunities to enhance creativity, personalize learning experiences, and democratize access to high-quality art instruction. Intelligent software can analyze student work, provide tailored feedback, and suggest personalized improvement strategies, fostering a more individualized and effective learning environment. Furthermore, AI can facilitate the incorporation of diverse artistic styles and techniques from various cultures, enriching the educational experience. However, the adoption of AI in art education also presents significant challenges. One primary concern is the potential for AI to undermine the subjective and humanistic aspects of art creation and appreciation. There is a risk that over-reliance on AI tools could stifle originality and reduce the emphasis on critical thinking and interpretative skills essential to the arts. Additionally, the deployment of AI technologies raises ethical issues related to data privacy, intellectual property, and the digital divide, potentially exacerbating inequalities in access to art education. This paper argues for a balanced approach that leverages AI's capabilities while maintaining the core human elements of art education. It calls for comprehensive strategies to integrate AI ethically and equitably, ensuring that these technologies enhance rather than replace the human touch in the creative process. By addressing these challenges head-on, educators and policymakers can harness the full potential of AI to enrich art education, preparing students for a future where technology and creativity coexist harmoniously.

Second Plenary / **442**

Impact of Small and Medium Scale Enterprises Development on Economic Growth in Nigeria

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In Nigeria, several intervention programs have been set up to offer specialized or long-term funding for the development of SMEs. That being said, it's crucial to recognize that SMEs have faced difficulties including loan nonpayment and missed goals. Thus, the purpose of this study is to investigate how SME development has affected Nigeria's economic growth between 1986 and 2023. Time series data, a secondary source of information gathered from the CBN statistical bulletin, is used in the study. Descriptive statistics, correlation analysis, multiple regressions, and the Augmented Dickey-Fuller (ADF) test for stationarity (unit root test) were among the statistical methods used in the investigation. With a p-value of 0.3339, the outcome shows that SMEOUT is not significant. The empirical results show that the expansion of Nigeria's gross domestic product (GDP) has been significantly fueled by SME financing. In particular, the study shows that the primary engine of economic growth—which raises the RGDP—is the sales turnover of SMEs. Furthermore, the statistical analysis demonstrates that a rise in SME funding is linked to an increase in the RGDP of the nation. The results essentially highlight how crucial it is to provide SMEs with financial support in order to promote economic growth in Nigeria. SMEs should concentrate on raising sales turnover and productive output. As a result, the study suggested that SMEs concentrate on raising their sales turnover and productive output. To increase their capacity to support economic growth, SMEs must make prudent investments, launch new ventures, and use efficient management techniques. Marketing ideas, goods, products, and services to consumers should be SMEs' top priority.

Keywords: SMEturnover, SMEouput, RGDP, growth, economic

Second Plenary / 407

EMPOWERING LECTURERS THROUGH VIRTUAL MENTORING AND COACHING: A QUALITATIVE EXPLORATION OF ITS EFFECTIVENESS IN ENHANCING TEACHING SKILLS AND STUDENT SUCCESS IN AL-HIKMAH UNIVERSITY

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Abstract:
This qualitative study investigates the effectiveness of virtual mentoring and coaching platforms in enhancing lecturer teaching skills and student success in Al-HikmahUniversity, Ilorin, Nigeria. Semi-structured interviews were conducted with lecturers who participated in virtual mentoring and coaching programs across different departments in the University.Thematic analysis was used to identify key themes. The findings reveal that virtual mentoring and coaching platforms improved lecturers' teaching skills, boosted their confidence, and enhanced student engagement and learning outcomes. The study highlights the importance of virtual support systems for lecturers' professional development and student success. The results provide insights for educators, policymakers, and stakeholders to harness the potential of virtual mentoring and coaching platforms in promoting teaching excellence and student success in higher education institutions. The study recommended that lecturers should leverage on the opportunities presented by virtual mentoring and coaching platforms to enhance their teaching skills and improve their students'academic success.

Keywords: Virtual Mentoring, Coaching, Lecturer Teaching Skills, Student Success, Al-Hikmah University, Qualitative Research.

Second Plenary / 275

Conflict of Laws, Religious and Cultural Diversity: The Emerging Challenges in Nigeria

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Abstract:

A fundamental challenge in any country operating a plural legal system is the conflict of laws. This challenge usually increases as the cultural and religious diversity of the society becomes more pronounced. This has been the case in Nigeria and controversies surrounding applicable laws in legal disputes between competing customary laws and other laws have been increasing.
This paper therefore seeks to examine the nature of conflict of laws in Nigeria and its causes. It will also discuss the rules for resolving the issues of conflict of laws and analyse their limitations. It will also analyse emerging challenges on conflict of laws in Nigeria particularly those arising from cultural and religious diversity and proffer solutions derived from experiences in other jurisdictions.

The methodology adopted in this paper is doctrinal and reliance was placed on primary and secondary sources of information. The primary sources included laws such as the Constitution, State High Court and Area Courts Laws and decided cases. The secondary sources included books, articles in journals and materials sourced from the internet, all of which were subjected to content analysis. It was found that with increasing cultural and religious diversity in Nigeria, issues of conflict of laws have been on the increase, while the existing regulations on conflict of laws are adequate, an aspect that has been contentious is change of personal law and it is recommended that there is more need for clearer guidelines on this.

Keywords: Conflict of Laws, Religious and Cultural Diversity, Challenges, Nigeria

Second Plenary / **240**

Classification of Lung Cancer using Mask R-Cnn and Cnn based Classification

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ABSTRACT

Lung cancer is a significant worldwide health challenge, with current diagnostic techniques frequently lacking in precision and efficacy. Our initiative intends to transform the diagnostic process by creating sophisticated deep learning models specifically designed for lung cancer classification. By precisely recognizing tumor locations in lung pictures at the pixel level, we aim to improve diagnostic accuracy by utilizing convolutional neural networks (CNNs) and MASK R-CNN methods. Furthermore, the incorporation of CNN-based classification models will facilitate the distinction between tumor locations classified as benign or malignant. As a result, the goal of our project is to progress the field of lung cancer detection and classification, ultimately providing physicians with faster and more precise diagnostic instruments for better patient care. Convolutional Neural Networks (CNNs) serve as the computational backbone of this endeavor. Operating as the processing unit, CNNs amalgamate the data gathered by MASK R-CNN, discern anomalies within lung images, and ascertain whether the lungs exhibit normal functionality or harbor abnormalities indicative of lung dysfunction, such as lung. MASK R-CNN, akin to a high-level magnifier, aids medical professionals in obtaining clear and precise insights into lung images, elucidating any anomalous pathways concealing cancer cells.

Keywords: Convolutional neural networks, classification, deep learning, feature extraction, image segmentation, lung nodules, mask R-CNN, object detection.

Second Plenary / **394**

Chemical Composition, Acute Toxicity, Anti-Inflammatory, and Antioxidant Activities of Ethyl Acetate Extract of Commiphora Pedunculata Stem-Bark

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Abstract

Commiphora pedunculata, native to northern Nigeria, is used by traditional healers in the region to treat numerous diseases, including fever and inflammatory conditions. The ethyl acetate of the plant was investigated for its chemical composition by GC-MS analysis, revealing the presence of akyl phenolic derivative, a fatty acid, and a long-chain alcohol. The acute oral toxicity in Wister rats to establish safe doses showed the LD50 to be 3807.8mg/kg. The extract displayed significant (P<0.001) anti-inflammatory activity, inhibiting carrageenan-induced paw swelling in rat by up to 76%at 1000mg/kg. The extract further showed strong DPPH radical scavenging potential with an IC50 values of 6.71µg/mL. These results suggest that the ethyl acetate extract of C.pedunculata is a valuable source of anti-inflammatory and antioxidant metabolites, and support the traditional use of the plant for the treatment of the inflammatory conditions.

Keywords: Commiphorapedunculata;anti-inflammatory; antioxidant, acute toxicity, phytochemicals.

Second Plenary / **374**

The Role of Meditation in Shaping the Sustainable Future of University-Industry Partnership

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Abstract

One of the most outstanding efforts which can promote synergy between the town and gown is collaboration. Through this process, knowledge is exchanged, innovations are created, and solutions to pressing societal and environmental challenges are proffered. This paper through qualitative and analytical approach, aim to interrogate the various roles that can emanate between universities and industries in shaping a sustainable future, with a focus on the mediation processes. It appraises successful partnership models in recent times. The study elucidates and explore the various ways in which mediation mechanisms can facilitate effective communication, conflict resolution and collaboration between universities and industry stakeholders, highlighting the importance of bridging the gap between theory and practice, through mutually beneficial partnership. The paper x-rays the benefits of mediation in addressing conflicts of interest, power imbalances, and differing priorities that may arise in collaborative endeavors. The paper recommends effective mediation in university-industry partnership, including the establishment of clear communication channels, the implementation of conflict resolution mechanisms, and the promotion of transparency and accountability.

Keywords: Sustainable Future, University, Industry, Mediation & Conflict Resolution

Second Plenary / **427**

Assessment of geothermal sources in Patigi region, North-Central Nigeria

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This study examines the geothermal potential in the Patigi region of Nigeria to address local and national power challenges. The study area and its environs are currently experiencing a power outage for the past three years. As energy is one of the most vital factors that facilitate development in a region or country at large. Aeromagnetic data were utilised to determine the geothermal potential, which could be added to the energy mix to boost the energy supply in the region. The geothermal parameters that were established from the study are the Curie point depth, geothermal gradient, and heat flow. The residual map was segmented into nine overlapping spectral blocks, and the logarithm of spectral energies was plotted against wave number. From these plots, the centroid depth (Z0) and the depth to the top boundary (Zt) were derived to calculate the Curie point depth (CPD), geothermal gradient (GG), and heat flow (HF). The results indicated that the Curie point depth values ranged from 34.09 km to 55.19 km, with an average of 41.87 km. The geothermal gradient values varied from 10.51 to 17.01 ℃/km, averaging 14.13 ℃/km. The heat flow values spanned from 26.27 to 42.53 mW/m², with an average of 35.32 mW/m². The deepest Curie point depth was observed in the central and northeastern parts of the study area, while shallower depths were found in other parts. Geothermal and heat flow contour maps highlighted hotspots in the southeastern and eastern regions, including Kusoji, Rogun, Ekopapo-Yagi, Etsufu, Sankwafuji, Momba, Koro, and Rodun. These hotspots are deemed suitable for geothermal energy exploitation, potentially addressing the power challenges in the study area and throughout Nigeria. Developing geothermal energy resources in Nigeria can significantly help achieve sustainable development goals 7, 11, and 13. It could also enhance a reduction of unemployment and poverty in Nigeria.
Keywords: Geothermal resources, Aeromagnetic data, Energy mix, Bida Basin, Heat flow

Second Plenary / **444**

Shikonin and Juglone as Modulator of Mycobacterium tuberculosis Protein tyrosine phosphatase B Activity: Implications for Tuberculosis Treatment

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ABSTRACT
Tuberculosis is an infectious disease caused by Mycobacterium tuberculosis (Mtb). Mtb protein tyrosine phosphatase B (Mtb-PtpB) is a virulence factor required for Mtb survival in host macrophages. Consequently, Mtb-PtpB represents an exciting target for tuberculosis treatment. Naphthoquinones can modulate Ptps activity, offering potential avenues for therapeutic intervention. Therefore, this study evaluated the modulatory effects of naphthoquinones on monoesterase activity of Mtb-PtpB.

The study's objectives were to determine the effect of naphthoquinones on the activity and kinetic parameters of Mtb-PtpB and inhibition constants of Mtb-PtpB in the presence of the naphthoquinones. The monoesterase activity of Mtb-PtpB was determined by measuring the para-nitrophenyl phosphate (pNPP) hydrolysis rate. The effect of naphthoquinones (shikonin and 5-hydroxyl-1,4-naphthoquinone [Juglone]} on Mtb-PtpB activity was monitored spectrophotometrically. Lineweaver-Burk and Dixon's plots determined the enzyme's kinetic parameters and inhibition constant in the presence of naphthoquinones. The results of the study revealed that the Vmax and Km for pNPP hydrolysis by Mtb-Ptp B were 2.96 nmol/min and 6.30 nM, respectively, Vmax of Mtb-PtpB was lowest at 10 μM shikonin (1.88 nmol/min), while the Km was highest at 10 μM 5HNQ (23.18 nM). At the same time, the kinetic analysis of the inhibition patterns suggests a mixed-competitive inhibition mechanism for the compounds. The study concluded that shikonin and 5HNQ inhibited the enzyme at optimal levels. The study recommended exploring those naphthoquinones for tuberculosis drug discovery.
Keywords: Tuberculosis, Mycobacterium tuberculosis, Naphthoquinones, Shikonin, Juglone, Mixed competitive

Second Plenary / 203

Network Intrusion Detection: A Systematic Review

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Abstract:

In the constantly changing world of network communication, cybersecurity is a crucial issue. This study focuses on the implementation of machine learning and deep learning techniques in Network Intrusion detection. The aim is to study the improvement of the precision and effectiveness of intrusion detection, ultimately fortifying the security of computer networks over time. it starts with an in-depth analysis of network traffic data, where key features that define normal and intrusive behaviour are extracted. Machine learning and deep learning algorithms such as SVM and autoencoders etc, are explored. To test the effectiveness of the algorithms. Furthermore, the work assesses the impact of various SVM kernels, tuning parameters, and feature selection techniques on intrusion detection performance, providing valuable insights for optimizing real-world SVM-based systems. The solution strives to achieve not only high detection accuracy but also prioritizes scalability and adaptability to address the demands of large-scale network environments. The study provides practical implications for cybersecurity professionals, enabling them to construct more robust and responsive defence mechanisms against emerging cyber threats.

Keywords:Cybersecurity, CNN, SVM, Health, Artificial Intelligence, Machine Learning, Network Intrusion, Algorithms,

Second Plenary / 386

Assessment of Degree of Technological and Skills Needed for Entrepreneurial success by business Education Graduates in Niger State

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Abstract

This study was conducted to ascertain managers' ratings of the technical and ICT skills required by small and medium-sized business owners in the state, as a result of the requirement for business education graduates in the Niger States to succeed in entrepreneurship. The study was led by two research questions, and two null hypotheses were examined at the 0.05 level of significance. The study was designed as a descriptive survey. There were 411 people in the study's population, of which 201 were sampled. Data for the study were gathered using a standardized 4-point rating scale questionnaire that was approved by two research specialists in the field of business education. 50 Small-Medium Enterprises (SMEs) managers in Kaduna State participated in the instrument's pilot test, and reliability coefficients of 0.77 were obtained by using Cronbach's alpha to assess the data gathered from the study. The two study questions were addressed using the mean and standard deviation, and the null hypotheses, which were developed at the 0.05 level of significance, were tested using the z-test. The results showed that managers of small and medium-sized businesses considered ICT and technical skills to be extremely important for business education graduates to succeed as entrepreneurs in the field. These results led to several recommendations, including that instructors should successfully instill technical and ICT abilities in their students regardless of their choice of course and that curriculum authors for business education should prioritize these skills in the curriculum content. In order to keep up with the challenges of entrepreneurial success in the field and in Nigerian society at large, institutional authorities should also mandate the creation of entrepreneurial skills training for all business education professors.

Keywords: Technological, ICT Skills, Entrepreneurial, Business Education

Second Plenary / **302**

Influence of Technological Advancement on Education Sustainability among Universities in Kwara State, Nigeria

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Abstract:

Technological advancement has been reshaping the landscape of higher education, offering both opportunities and challenges for sustainability initiatives. This abstract explores the influence of technological advancement on education sustainability among universities. The integration of emerging technologies, such as artificial intelligence, Internet of Things, and virtual reality, has transformed traditional teaching and learning methods, enabling universities to enhance their educational offerings while minimizing environmental impact. This abstract examines the role of technological innovation in promoting sustainability practices within educational institutions, including digitalization of administrative processes, implementation of online learning platforms, and development of smart campus initiatives. Furthermore, it investigates the potential environmental benefits and challenges associated with the adoption of new technologies in higher education. By leveraging technological advancement, universities can advance their sustainability goals, reduce resource consumption, and promote environmentally conscious behavior among students, faculty, and staff. However, this abstract also acknowledges the need for careful planning and assessment to ensure that technology-driven sustainability initiatives align with broader educational objectives and contribute to long-term sustainability goals. Through a comprehensive analysis of the influence of technological advancement on education sustainability, this abstract aims to provide insights for universities seeking to harness the power of technology to create more sustainable educational environments.

Keywords: Technological advancement, education sustainability, universities, emerging technologies, digitalization, smart campus, environmental impact.

Second Plenary / 435

An overview of the Legal Requirements for Entrepreneurial Practice for the Start-Up in Nigeria

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Entrepreneurship is an antidote to unemployment globally. It has been discovered that the observed situation of unemployment is more serious than what official statistics want us to believe in Nigeria. The rate posted by the CBN is doubtful; the unemployment rate in Nigeria has reached an unacceptable level leading to all sorts of vices like fraud, corruption, banditry, militancy, "boko haram" insurgency, herdsmen violence, money laundering and cybercrime. To put these problems at bay, entrepreneurship is very essential. However, in spite of the relevance of entrepreneurship in solving unemployment problem in Nigeria, this paper seeks to discuss the legal hurdles any willing entrepreneur in Nigeria will cross before he can establish a successful business. This paper will use doctrinal method, we shall look at the various laws, rules and regulations governing formation of business organizations in Nigeria, the law of intellectual property as it relates to entrepreneurship, the law of taxation and tax reliefs available to an entrepreneur, standardization of products, business finance through raising of capital and issue of collateral security and guarantorship and insurance of business undertakings. This paper will conclude by recommending alternative method of dispute resolution so as to reduce cost, time and preserve business relationship.

Second Plenary / 243

Ameliorative potentials of garlic (Allium sativum) on physiological and pathological responses of Clarias gariepinus exposed to 2, 4-dimethylamine salt

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ABSTRACT

Indiscriminate discharge of agrochemicals from farmland in form of runoff into water bodies has detrimental hazard effects on aquatic animals. This study therefore investigated the toxicity of 2,4-Dimethylamine salt on enzymes activities, haematological, histopathological alterations and growth responses of Clarias gariepinus, by exposing the juveniles to both lethal (0.0, 0.36, 0.72, 1.44 & 2.16 g/l) and sub-lethal (0.03 g/l) concentrations of 2,4-Dimethylamine in static renewal bioassays for 96 h and 28 d. The 2,4-Dimethylamine-exposed fish were fed on diets with varying percentage (0, 1,

2, 3 & 4 %) inclusion of garlic for 28 days. After the experimental periods, fish were sacrifice to collect blood, removed tissues for haematological, biochemical and histopathology assay. There was reduction ($P < 0.05$) in the activities of the enzymes during 96 h exposure, while a great increase ($P < 0.05$) in enzymes activities occurred in-group D fed on 2 % garlic. There levels of erythrocytes and leucocytes decreased ($P < 0.05$) and increase ($P < 0.05$) respectively compared to control. While a great improvement ($P < 0.05$) and reduction in the values of erythrocytes and leucocytes revealed in groups fed on diet supplemented with 2 % garlic. The tissues revealed various pathological lesions with a reversed in-group fed 2 % garlic. The percentage weight gain and specific growth rate increased in-group D fed on 2 % garlic. This indicates that 2,4-Dimethylamine induced physiological disorder in Clarias gariepinus but 2 % garlic in diet is capable of ameliorating the toxicity of 2,4-Dimethylamine on the fish.

KEY: Physiology, Clarias gariepinus, 2,4-diethylamine, Amelioration, Growth

Second Plenary / **403**

Comparative Studies Between The Mechanism Of Antibacterial Activity Of Ethanolic And Methanolic Extracts Of Manniophytonfulvum Against Staphylococcus Aureus

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ABSTRACT
Before antibiotics and other contemporary medications were developed, medicinal plants were used all over the world. Manniophytonfulvum belongs to the euphorbiaceae family and it is a shrub that is widely distributed across Africa ever-green forest. It possesslarge leaves with young stem and bristled trichomes. Utilizing the Agar and broth dilution methods, this study seeks to ascertain the antibacterial activity and phytochemical constituents of M. fulvum.Thepercentage yield for ethanol and methanol extract were 5.29% and 8.82% respectively. Phytochemical screening revealed the presence of Tanins, Saponins, Alkaloids, Terpenoids, Flavonoids and phlobatannins.Agar diffusion was used to test the antibacterial activity of M. fulvum ethanolic and methanolic extracts at various dosesThe antibacterial activity of the ethanolic and methanolic extract against Staphylococcus aureus were determined. Further microbial assay on Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) were50 ± 0.23 mg/ml and 75 ± 0.35 mg/ml respectively. Antibiotic susceptibility testing revealed the sensitivity of the organism to Tetracycline(TET), Chloramphenicol(CHL), Amikacin(AMK); Intermediate to Gentamicin(GEN), Ciprofloxacin(CIP), Vancomycin(VAN); and resistant to Clotrimoxazole(COT), Cefuroxime(CRX), and Ceftazidime(CPZ). The scanning electron microscopy analysis showed how the Manniophytonfulvumcaused gross distortion of the cell membrane of S. aureus resulting in cell lysis. The study affirmed the efficacy of ethanolic and methanolic extract of Manniophytonfulvum extract against Staphylococcus aureus.
Keywords: Scanning electron Microscopy (SEM), Antibacterial activity, Percentage yield, Phytochemical Screening, Manniophytonfulvum

Second Plenary / **244**

Artificial Intelligent-Based Pipeline Leakage Prediction System for the Downstream Sector: A Proposal

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Abstract:

Pipeline leakage remains a critical challenge in the downstream sector, with ramifications including economic losses, environmental harm, and safety hazards. This study proposes an artificial intelligence-based pipeline leakage prediction system. The approach would involve the development of and integration of a laboratory test bed equipped with flow sensors to monitor pipeline conditions in real-time and facilitate early leak detection. Additionally, a comprehensive dataset of historical pipeline leakage incidents in Delta State, Nigeria would be sourced from the National Oil Spill Detection and Response Agency (NOSDRA). This will be utilized for training and validating the predictive pipeline models. Utilizing machine learning algorithms, the system will analyze sensor data and historical records to discern patterns and anomalies indicative of potential leaks. By harnessing artificial intelligence, the system will accurately forecast the probability of pipeline leakage, enabling proactive maintenance and preventive measures. The fusion of the laboratory test bed and the secondary data set would ensure the robustness and efficacy of the prediction system, rendering it an asset for downstream sector operators. This study will contribute to ongoing endeavours aimed at enhancing pipeline safety, minimizing environmental impact, and optimizing operational efficiency within the oil and gas industry.

Keywords: Artificial Intelligence, Pipeline leakage, Historical data, Oil and Gas Industry, Downstream Sector.

Second Plenary / 436

Imperative of Renewable Energy Development for Nigeria's Industrial and Technological Revolution

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Abstract

For more than a century, the world's main sources of energy have been fossil fuels. Hydro electricity and nuclear energy together contribute some 9% of present world annual energy consumption and the biofuels in the form of firewood, or other combustible plants or animal materials are thought to provide about a tenth of the total. However, the finite nature of fossil fuel energy resources has raised some questions about its long term sustainability. The intricate interplay of demand, but there is also concern over the impact on the environment of burning fossil fuels. It is for this reasons that serious consideration is being given to alternatives to these fossil fuels in the form of renewable energy. A sustainable renewable energy policy and projects will definitely involve cost which only budgetary allocations mat not be able to meet, therefore there is the need to look at other financing options like Sukuk. We contend in this paper that Nigeria as a member of organization of Islamic countries can utilize Sukuk to raise fund in accordance with Islamic principles which forbid interest to finance renewable energy in Nigeria. This will minimize cost and ensure quality of the projects.

Keywords: Energy, Nigeria, Renewable, Policy, Sukuk

Second Plenary / **439**

Availability of Agricultural Mechanized Equipment to Arable Crop Farmers in Asa And Ifelodun Local Government Areas of Kwara State, Nigeria

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Mechanization in Agriculture is a key factor to increasing crop yield significantly to meet the food demand driven by population growth. This project assessed the availability of agricultural mechanized equipment to arable crop Farmers in Asa and Ifelodun Local Government Areas in Kwara State, Nigeria. This paper investigated available agricultural mechanized equipment to arable crop farmers in the study area, their level of awareness of available agricultural mechanized equipment in major Agricultural institutions in the state, willingness to use, the sources and the constraints faced. Two Local Government Areas were randomly selected in the study area; 360 Respondents were interviewed with the aid of an e copy of a well-structured interview schedule (kobo tool box). The data for this study was analyzed using descriptive statistics, frequency, mean, weighted mean score, and ranking while Pearson Product Moment Correlation was used to test Hypothesis of the study. The findings revealed that 55% of the respondents were male with the average age of 53.97 years, 44.20% of the farmers had no formal education and an average income of N100-N500,000 annually. Tractors were identified as the most available mechanized equipment to farmers from the various Agricultural institutes in the state. Majority (86.70%) of the respondents were willing to utilize the mechanized equipment, 90.83% of them were not aware of the existence of tractors in the various institutions, 41.90% get their tractors from privately owned firms and the major constrain was the high initial cost of the equipment. It is recommended that the agricultural institutions create increased awareness on the availability of the various mechanized equipment in their institutions and ease the process of renting the equipment to reduce the cost of production farmers.

Second Plenary / **238**

Artificial Intelligence-Enhanced Prediction of Binding Interaction of Compounds from Euphorbia heterophylla against P. falciparum Erythrocyte Membrane Protein-1

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Abstract:

Malaria remains a significant global health threat, and the emergence of drug-resistant parasites necessitates the discovery of novel therapeutic agents. Euphorbia heterophylla, a plant with traditional medicinal uses, has shown potential as a source of anti-malarial compounds. This study leverages artificial intelligence (AI) to predict the binding interaction of compounds from E. heterophylla against Plasmodium falciparum erythrocyte membrane protein-1 (PfEMP-1), a critical protein involved in parasite-host interactions. Using a combination of molecular docking and machine learning algorithms, we identified potential lead compounds from E. heterophylla that exhibit strong

binding affinity to PfEMP-1. Our AI-enhanced approach predicted the binding modes and affinities of these compounds, providing valuable insights into their potential as anti-malarial agents. The results highlight the potential of E. heterophylla-derived compounds as novel therapeutics against P. falciparum and demonstrate the power of AI in accelerating drug discovery. This study paves the way for further experimental validation and optimization of these lead compounds, contributing to the development of effective treatments against malaria.

Keywords: Artificial Intelligence, Euphorbia heterophylla, PfEMP-1, Malaria, Anti-malarial compounds, Molecular docking, Machine learning.

Second Plenary / 155

Enhanced adsorptive performance of activated carbon on eosin yellow dye from aqueous solution using cetyltrimethylammonium bromide

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Abstract

The need for enhanced adsorbents prepared from low-cost materials inspired this study. The surface of activated carbon prepared from groundnut shells was modified by cetyltrimethylammonium bromide for the removal of eosin yellow dye from aqueous solution. The adsorbents were characterized by Fourier Transform Infrared Spectroscopy (FTIR) and Scanning Electron Microscopy (SEM). Parameters like initial concentration, adsorbent dosage, pH, contact time and temperature were used to investigate the adsorptive performance of the modified activated carbon (MAC) and unmodified activated carbon (UMAC). The study indicated that the adsorption process of eosin yellow dye onto both MAC and UMAC is well described by Langmuir adsorption isotherm and Pseudo-second-order kinetic models. This revealed the involvement of chemisorption between adsorbent and adsorbate molecules. The Langmuir maximum monolayer adsorption capacities are 29.50 mg/g and 25.25 mg/g for MAC and UMAC respectively. The thermodynamic study showed the adsorption process to be exothermic, spontaneous within the range of temperature studied and low degree of disorderliness. Modified activated carbon (MAC) showed an improved adsorption capacity over the unmodified one (UMAC) in all the investigated parameters.

Keywords: Adsorption, activated carbon, eosin yellow, cetyltrimethylammonium bromide

Second Plenary / 182

Innovations in Arts Education in Globalized 21st Century: Nigerian Perspective

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Abstract

Nigerian education curriculum according to the National Policy on Education revised edition (2013) has been reviewed severally to meet global educational need of the people. The extent of human, technological, economic and political development of a nation is not dependent on her abundant natural resources but rather on the educational system. Arts education which is the application of principles and philosophies of education to the fields of arts, apart from developing students competencies in literacy, numeracy and ability to calculate also helps in their cognitive, affective and psychomotive development. Students, in addition to the acquisition of these competences learn to become responsible citizens through education. This article argues that innovative arts education is pivotal to national growth and development. It will look at the historical overview of Nigerian education, arts, culture and the structure of Nigerian basic and post basic education. The influence of colonization, migration, cultural alienation and stereotype will be discussed in this paper. It will also survey globalization, modernization and technological advancement as key to innovations in arts education in the 21st century. Through critical analysis of various factors, the paper will contribute to deeper understanding of the evolving nature of arts education in Nigeria. It encourages the use of innovative pedagogies in schools for effective content delivery.

Keywords: Arts, Education, Globalization and Innovation

Second Plenary / **358**

Enhancing Cloud Security: A Hybrid Intrusion Detection System Using Snort and OSSEC

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Abstract
Cloud computing has brought about a significant transformation in how computing resources are accessed and managed by businesses and individuals. The growing adoption of cloud technologies has underscored the need for robust security measures. Specifically, Intrusion Detection Systems (IDS) are pivotal in identifying and addressing potential threats within cloud environments. This article focuses on the concept of a Hybrid Intrusion Detection System (IDS) within the context of cloud computing, leveraging Snort as a network IDS and OSSEC as a host IDS. The exploration encompasses an in-depth examination of cloud computing, an extensive review of pertinent literature on cloud services, the delineation of past study limitations, a synthesis of previous research findings, and a comprehensive discussion of various signatures and techniques employed in hybrid intrusion detection systems. The integration of Snort and OSSEC in a cloud environment facilitates a comprehensive approach to security, enabling early threat detection and swift response mechanisms, thereby elevating the overall security posture of cloud environments.

Keywords: Cloud Security, Hybrid IDS, Snort, OSSEC, Network Security

Second Plenary / **242**

Awareness and Acceptance of Premarital Genotype Screening among Youths in Nigeria

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Abstract:

This study investigates the awareness and acceptance levels of premarital genotype screening among youths in Nigeria. Sickle cell disease (SCD) is a major public health concern in Nigeria, with a high prevalence rate and significant morbidity and mortality among affected individuals. Premarital genotype screening is a preventive measure aimed at reducing the incidence of SCD by identifying carrier couples and providing them with genetic counseling and reproductive options. However, despite its potential benefits, the awareness and acceptance of premarital genotype screening among Nigerian youths remain relatively low. This study presents findings from a mixed-methods study conducted to explore the factors influencing youths' awareness of premarital genotype screening, their attitudes toward the practice, and the barriers to its uptake. The study discusses implications for public health interventions aimed at increasing awareness and promoting the uptake of premarital genotype screening among Nigerian youths, with a focus on culturally sensitive and youth-friendly approaches.

Keywords: Premarital Genotype Screening, Youths, Awareness, Acceptance, Sickle Cell Disease, Nigeria, Public Health Interventions.

Second Plenary / **280**

Entrepreneurship Financing for Start-Ups: Roles of Crowdfunding

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ABSTRACT:

The study evaluated the impact of entrepreneurship financing and start-ups: Roles of crowdfunding. The significance of crowdfunding in financing start-ups was discussed as well as various government schemes for prospective entrepreneurs. The study concluded that crowdfunding provides many ways to support creative enterprising businesses. Also, that the effectiveness of start-ups is influenced by the role crowd funding plays through mentoring, training and legal support to entrepreneurs.

Keywords: Entrepreneurship financing, start-ups, Roles of crowdfunding, working capital, entrepreneurs.

Second Plenary / **347**

Overview of Cryptography Algorithms for Quantum Era

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Abstract:

The advent of quantum computers indicates that the reliance on secrete or public key cryptography ends with classic computers. quantum computer operates at exponential rate compared to classical computers. This gives quantum computers the ability to solve problems that are relatively difficult for classical computers such as factorization of large prime numbers. Quantum computer successfully breaks cryptography algorithm such as RSA, El-Gama, ECC, DH, and so on within a very short period of time (possibly less than an hour). Therefore, researchers are responding by developing cryptographic technics that will be reliable in the quantum era. This study presents systematic review of quantum cryptography algorithm for the security of data in various format such as audio, video, text and image.

Keywords: quantum computer, cryptography, RSA, El-Gama, public key, Information security

Second Plenary / **415**

Automating Admission Processes in Nigerian Private Universities: A Comparative Qualitative Study of Al-Hikmah University and Lead City University

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Abstract
This qualitative study explores the automation of admission processes in two Nigerian private universities, Al-Hikmah University and Lead City University. Semi-structured interviews were conducted with 20 participants, including admission officers, IT staff, and students. Thematic analysis reveals that automation has improved efficiency, reduced manual errors, and enhanced student experience. However, challenges such as inadequate infrastructure, limited technical support, and resistance to change were identified. The study highlights the importance of training, digitalization of documents, and online payment integration. The findings suggest that while both universities have made progress in automation, Al-Hikmah University has a more comprehensive online admission system. In contrast, Lead City University, has maintained admission system for several years focusing primarily on simplicity and ease of access. The study concludes that automation has the potential to transform admission processes in Nigerian private universities, but requires a concerted effort from management, staff, and stakeholders.

Keywords: Automation, Admission Processes, Nigerian Private Universities, Al-Hikmah University, Lead City University, Qualitative Study, Efficiency, Student Experience.

Second Plenary / **411**

Melatonin Attenuates The Effect Of Cannabis Sativa Leaf On Oxidative Stress In Wistar Rats

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ABSTRACT
This study investigated the effect of co-administration of melatonin and Cannabis sativa (CS) on oxidative stress in female wistar rats. Twenty female rats (160 g ± 1.09) were separately assigned into four groups of five animals each, such that the rats in groups 1, 2, 3 and 4 respectively received orally 1 ml of distilled water, 2mg/kg body weight (bw) CS+4mg/kg bw melatonin, 4mg/kgbw CS+4mg/kg bw melatonin and 6mg/kgbw CS+mg/4kg bw melatonin respectively for two weeks. Lactate dehydrogenase (LDH), catalase, glutathione reductase (GSH), glutathione peroxide (GPx), malondialdehyde (MDA) and total antioxidant capacity (TAC) were determined using standard methods.
This study revealed that co-administration of CS and melatonin showed no significant difference in all the parameters across the groups treated with low doses of CS (2mg and 4mg) when compared with the control. However, co-administration of CS and melatonin significantly ($p<0.05$) increase LDH and MDA levels in the groups treated with high dose of CS (6mg) when compared with the control. Also, there was significant ($p<0.05$) decrease in catalase, GSH, GPx, and TAC in the groups treated with high dose of CS (6mg) when compared with the control.
In conclusion, this study suggested that CS alone could cause oxidative stress at both low and high doses, which could be prevented by melatonin when consume at low doses. However, further research studies are needed to show if increase in the concentration of melatonin may prevent CS at high dose (6mg) since the same dose of melatonin was given at both low and high doses in this study.
Key words: Cannabis sativa, Melatonin, Oxidative stress, co-administration

Second Plenary / 348

Prebiotic Effects of Inulin on the Neurobehavioral and Neuromorphological Alterations in Ketamine-Induced Neurodegeneration in Mice

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Abstract:

Prebiotics such as inulin, BGOS have been established to have a beneficial role on the diversity and density of the gut microbiome in a biological host. A healthy gut microbiome has been reported to enhance hosts'metabolic and physiological function. Hence, this research aims to explore innate beneficial biological mechanisms to manage certain neurobehavioral and neurodegenerative conditions. Eighty (80) Swiss (4 weeks old) mice divided into 8 groups (n = 10) were exposed to ketamine (50mg/kg) and increasing (2g, 4g, & 8g/kg/feed) concentration of inulin supplementation in animal feed. Ketamine was administered for 5 days via intraperitoneal route while inulin was via oral gavage for 30 days. Neurobehavioral test for working memory, exploratory, locomotor and anxiolytic behaviors were carried out upon completion of administration. 24hrs after, animals were sacrificed via cervical dislocation and target tissue (prefrontal cortex & hippocampus) were harvested and prepared for histological, immunohistochemical, and biochemical evaluations. Research findings

showed that ketamine and inulin either singly or combine improved behavioral indices and quelled oxidative stress but triggers inflammatory responses and negatively alter neurotransmission. Histological sections revealed mild structural alteration and protein synthesis in brain of exposed animals. Conclusively, ketamine administration in this study produced mild neurodegeneration while inulin, probably due to the product make or concentration tested, did not produce the hypothesized prebiotic outcomes.

Keywords: Prebiotic, Inulin, Ketamine.

Second Plenary / **264**

Comparative Analysis of Interest Rate and Manufacturing output in West Africa

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ABSTRACTS
This study examines the comparative analysis of interest rate and manufacturing output in West Africa under the dual exchange rate system. The trends of output of manufacturing sector as well as the comparative effectiveness of interest rates under flexible and fixed exchange rates system on the output of manufacturing sector in West Africa was investigated over a period of 49 years covering 1975 to 2023. Auto Regressive Distributed Lag (ARDL) was employed to determine the relationship among the variables. Investigating the behaviours of the variables, the trend analysis on the variables shows that there was a steady growth in the manufacturing output in West African Economic and Monetary Union (WAEMU) but West Africa Monetary Zone (WAMZ) witnessed fluctuations but higher values of manufacturing output over the (WAEMU) throughout the years under study. Interest rate was found to have negative significance in the (WAMZ) while it has positive significance impact in (WAEMU). The study therefore concludes that uniform monetary policy instrument cannot be adopted in the region. The government of the sub-region should intensify efforts at managing the interest rates independently to improve the output derivable from manufacturing sector of the economy.

Second Plenary / **395**

Robustness of Semi-Parametric Estimators to low levels of Multicollinearity, Sample Size and Time Point in Non-Linear Models with Non-Gaussian Responses

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ABSTRACT
The violation of normality assumption of the error term has been an issue of concern to Econometricians and Statisticians. Despite this,some researchers discovered that ignoring dependency and

spatial heterogeneity when both are actually present in a model would lead to bias in parameter estimation. The objectives of this study were to: (i) fit a new non-linear panel datamodelthat incorporates unobservable heterogeneous variable; (ii) investigate the behaviour of four estimators of non-linear model with respect to their robustness to low level ofmulticollinearity andlowsample size; (iii) compare the efficiencies of the existing non-linear models with the newmodel. A new non-linear model of the exponential form:y_it=β_0 eˆ(β_1 ρ_1it X_1it+β_2 ρ_2it X_2it+α_i+U_it); i=1,⋯,n; t=1,⋯,T which was proposed by K. Jimoh and Yahya, 2018 was fitted. Hence, log 〖(y〗 _it)=logβ_0+β_1 ρ_1it X_1it+ β_2 ρ_2it X_2it+α_i+U_it where y_it is the response variable,X_1itand X_2it are the predictors,β_0 is the intercept, U_itis the idiosyncratic error term and α_iis the unobserved heterogeneity variable on U_it. Data forsmall sample size, n = 20 and small time point, T = 5, with small collinearity level, 0.1 were simulated using 1000 iterations. U_itwere simulated from exponential density with two heteroscendastic orders δ = 1, 2. The semi-parametric estimators of Continuously Updating (CU), Empirical Likelihood (EL) and Exponential Tilting (ET) were employed over some smoothing parameter values and they were all compared with the Least Square (LS) and Generalised Method of Moments (GMM) estimators using theMean Square Error (MSE), Mean Absolute Error (MAE) andMedian Absolute Error (MedAE) criteria. We now discovered that among the estimators considered, at ρ = 0.1,the CU was the best when n =20 and T=5. In addition, whenδ = 1 and ρ = 0.1,CU was the best when n =20.

Kew Words: Semi-parametric; Non-Linear Model; Heterogeneity; Latent Variable; Likelihood; Moment.

Second Plenary / 372

Sequestration of Cd2+ onto Novel Ash Rice Husk Supported Zerovalent Iron Nanocomposite (ARH-nZVI)

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Abstract

The application of nanotechnology in combatting the present menace and challenges posed by cadmium ions toxic heavy metals in the environment is our primary pivotal in this study. To this end, ash rice husk-supported zerovalent iron (ARH-nZVI) nanocomposite has been specifically structured towards sequestration of Cd2+ from their aqueous solutions. ARH-nZVI nanocomposite was characterized by point of zero charge (PZC), BET surface area 75.87 m²/g, pore width 107.32 Å, BJH pore diameter 114.02 Å, X-ray Florescence (XRF), scanning electron microscopy –energy dispersive X-ray (SEM/EDX), and FTIR analyses. Batch adsorption of Cd2+ was investigated vis-à-vis experimental optimization of operational parameters. The kinetic models fitted well to Pseudo second-order, Elovich, and Fractional power. Intraparticle and external diffusion models well portrayed the mechanism as confirmed by Bangham and Boyd models. Equilibrium data were fitted to Langmuir, Freundlich, Jovanovic, Temkin, and Dubinin-Raduskevich models. Both kinetic and isotherm models were validated by the sum of square error (SSE), Chi-square test (χ2), and normalized standard deviation (Δq) statistical models. Maximum adsorption capacities of ARH-nZVI superseded most

nanocomposites reported for adsorption of Cd2+. The thermodynamic parameters, ΔGo, ΔSo and ΔHo revealed the feasibility, spontaneity, and endothermic nature of the adsorption process. The study showed that ARH-nZVI is a promising nanocomposite that could be utilized on an industrial scale for water remediation.

Keywords: Nanotechnology; Adsorption; Heavy metals; Kinetics; Isotherm; Thermodynamics

Second Plenary / 410

LIFELONG LEARNING MINDSET AND EMPLOYABILITY OF SELECTED NIGERIAN UNIVERSITY UNDERGRADUATES

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Abstract
This study investigates the relationship between a lifelong learning mindset and the employability of Nigerian University Undergraduates. It focuses on three key aspects of a lifelong learning mindset: learning to know, learning to work, and learning for personal growth. The research examines how these factors influence employability in the context of employment risk, employment protective behaviors and job-seeking behavior respectively. The study uses a quantitative method conducting a survey of 246 students from a private University in Nigeria who are currently in their final year, through a self-designed questionnaire administered both physically and online. Chrobach Alpha Reliability test of internal consistency showed an Alpha value of (0.963) indicating consistency of the survey instrument. The result of the regression analysis for the three hypotheses revealed that learning to know significantly influences employment risk (β=0.953; p<0.00), learning to work significantly influences the job seeking behaviour (β=0.959; p<0.00) and learning for personal growth significantly influences employment protective behaviour (β=0.960; p<0.00). The study concludes that lifelong learning mindset is relevant for improving employability. The study recommends that undergraduates should have strong desire to embrace continuous learning opportunities so as to improve their chances in the work environment as well as have an edge in the job market. Also, Universities should ensure to promote lifelong learning activities in order to gain more experiences which can improve their student's employability rate.
Keywords: Lifelong learning, Employability, Entrepreneurial Orientation

Second Plenary / 359

Zero Day Attack Vulnerabilities: Mitigation using Machine Learning for Performance Evaluation

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Abstract
The paper explores and investigate how machine learning methods can help defend against zero-day cyber-attacks, which are a major concern in cybersecurity. The study focuses on several types of machine learning algorithms, including decision trees, random forests, support vector machines (SVM), and gradient boosting classifiers. The study examines how well these algorithms can detect

and prevent zero-day attacks. To do this, we carefully prepare a dataset containing different network characteristics for analysis, ensuring that categorical variables are handled properly. We then train and test the selected algorithms using this dataset. The results show that random forest performs better than the other algorithms in terms of accuracy and detection rates. This is because random forest can effectively identify complex patterns associated with zero-day attacks by continually improving its understanding of weaker models. The findings highlight the potential of using machine learning to strengthen cybersecurity defenses against emerging threats like zero-day attacks. The study was conducted and evaluated using the CSE-CIC-IDS2018 Dataset.

Keywords: Zero-day attack, Machine Learning, Random Forest, CSECICIDS2018 Dataset

Second Plenary / 384

IPSAS Adoption and Financial Accountability in the Nigerian Public Sector: Moderating Role of Professional Accounting Regulation

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Abstract

Projecting financial accountability as a bane rather than responsibility has been a major political setback for several state governments in Nigeria since the beginning of the current republic. While IPSAS Accrual accounting has been adopted in Nigeria to improve financial accountability, much still seems desired, particularly with the involvement of the institute of Chartered Accountants of Nigeria (ICAN) in midwifing the enhancement of financial accountability amid IPSAS adoption. To this end, this study examines how ICAN accountability index moderate the relationship between IPSAS adoption and financial accountability. Data were collected from professional accountants in the public sector across the six geopolitical zones and the analyses were done with partial least square structural equation modelling (PLS- SEM). The findings of this study are expected to suggest policy implications and contribute to the current debate on economic restructuring cum financial accountability calls on state executives.

Keywords: Public Sector, Financial Accountability, IPSAS, ICAN-Accountability Index

Second Plenary / 200

Innovative Sustainability: The Demand Of The 21st Century Legal Education And Practice

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Abstract:

In an age of accelerating innovation and disruptive technologies, critical sustainability challenges such as resource depletion, biodiversity loss, food security, climate change, and social inequality demand a transformed legal profession. The legal profession must now go beyond purely legal solutions to playing a pivotal role in building a sustainable society. New generation of lawyers require the skills to develop innovative policies, advocate for collective and individual interests, and address complex societal problems effectively. It is against this backdrop that this paper examines the current legal education in Nigeria and its capacity of producing lawyers who can meet the 21st century demands. It argues that legal education can only remain relevant if it equips graduates with the necessary skills to solve societal problems. In view of this, a review of the Nigerian legal education structure and content is proposed. This paper recommends amongst other things, a curriculum upgrade incorporating interdisciplinary and legal technology courses, digital and innovation skills, critical thinking and analytical skills.

Keywords: Legal education, Innovation, Curriculum, Sustainability.

Second Plenary / **364**

INTEGRATED REPORTING AND FINANCIAL PERFORMANCE OF INDUSTRIAL GOODS FIRMS

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Abstract
The process of reporting firms'activities to her stakeholders have evolved over time, from the traditional financial reporting, to sustainability reporting and now Integrated Reporting. Stakeholders of firms now see the necessity for firm to disclose both financial and non-financial information in a single report. This became imminent because both individual reports lack the conciseness and transparency to assist investors in making better investment decisions. Against this backdrop, this study examined the impact of integrated reporting on the financial performance of listed industrial goods firm in Nigeria after controlling leverage, firm size and firm age. The study sampled thirteen listed industrial goods firms for a period of 2020 to 2024. The ordinary least squares were employed to draw inference on the study. Result from the regression analysis revealed that IR has positive and significant impact on the financial performance of industrial goods firms. The control evidence mixed relationship with financial performance of listed industrial goods firms. The study recommends that regulatory authorities in reporting should look into the adoption reporting as a robust reporting strategy.
Keywords: Reporting, Integrated Reporting, Firm, Financial Performance,Industrial Goods.

Second Plenary / **325**

Moderate Role of Artificial Intelligent on The Relationship Between Intellectual Capital and Financial Performance of Quoted Oil and Gas Companies in Nigeria

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ABSTRACT

The management of intellectual capital and its impact on financial performance is a critical concern for oil and gas companies globally. In Nigeria, where the industry plays a pivotal role in the economy, this issue is particularly significant. The main problem addressed in this study is the lack of comprehensive understanding regarding the relationship between intellectual capital and financial performance in the context of Nigerian oil and gas companies. This gap in knowledge hinders the effective management of intellectual capital and limits the potential for improving financial outcomes. The effective management of intellectual capital can positively affect individuals by creating more stable employment opportunities, enhancing skills development, and potentially increasing income levels. Conversely, a lack of attention to this area may lead to job insecurity and limited career advancement opportunities. In society, the efficient management of intellectual capital in the oil and gas sector can contribute to economic growth, technological advancement, and overall societal development. Conversely, the mismanagement of intellectual capital can impede progress and hinder the industry's ability to contribute positively to society. The proposed solution involves the application of artificial intelligence (AI) to moderate the relationship between intellectual capital and financial performance. By utilizing AI tools and techniques, companies can better understand the dynamics between intellectual capital and financial outcomes, leading to more informed decision-making and improved performance. To execute this solution, oil and gas companies can start by conducting a thorough assessment of their intellectual capital and financial performance metrics. They can then implement AI technologies, such as machine learning algorithms, to analyse data and extract valuable insights. Additionally, companies can invest in employee training programs to build AI capabilities within their organizations and ensure sustainable implementation of AI-based solutions. In this paper the moderation role of artificial intelligence in managing intellectual capital has the potential to significantly enhance the financial performance of Nigerian oil and gas companies, ultimately benefiting individuals, society, and the economy as a whole.

Second Plenary / 253

Impact of Digital Transformation on Human Capital Development in Nigeria.

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Abstract

The rapid integration of digital technologies into various sectors presents a unique opportunity to enhance educational and professional capacities in developing economies. This proposed study seeks to explore the impact of digital transformation on human capital development in Nigeria through a quantitative analysis using time-series data from 1990 to 2023. Our research will focus on understanding how digital initiatives can be harnessed to improve human capital indices such as educational attainment, technical skill, and digital literacy in Nigeria. The Autoregressive Distributed Lag (ARDL) model will be used to analyse both the short-term and long-term effects of digital transformation on human capital development. The ARDL model is chosen for its effectiveness in distinguishing the integrated and differential impacts over time, providing a detailed view of how immediate interventions influence long-term development outcomes. Data will be collected from the World Bank and the Central Bank Statistical Bulletin. The study will offer insights into the policy measures needed to foster a conducive environment for digital advancements that genuinely enhance educational and professional outcomes. The research will contribute to the literature by using principal components analysis to produce an index for human capital, thereby enriching the literature in determining the effect of digital transformation on human capital development.

Keywords: Digital Transformation, Human Capital Development, ARDL Model

Second Plenary / **345**

Development of Artificial Intelligence-Based Intruder Detection System

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ABSTRACT:

The rise of smart home technologies has led to a growing need for an AI-based intruder detection system. This project aims to develop a model using advanced artificial intelligence algorithms trained with a theft behaviour dataset. The model will be integrated with surveillance cameras, motion sensors, and smart locks, interconnected within a network. The system uses deep learning techniques to continuously learn and adapt to evolving threats, enhancing its accuracy and effectiveness over time. The system also incorporates a comprehensive theft dataset, which helps the AI model differentiate between benign events and genuine security threats. The main features of the system include proactive threat detection, real-time alerting mechanisms, and automated response capabilities. Upon detecting suspicious activity, the system will triggers alerts to homeowners and authorities, enabling timely intervention to prevent potential burglaries or intrusions. Additionally, it will be able to activate deterrent measures likes alarm sirens, flashing lights, or automated lockdowns to safeguard the premises. The system will represent a significant advancement in home security technology, offering homeowners a proactive and intelligent solution to protect their properties and loved ones.

Keywords: Algorithms, Burglaries, Datasets, Intruder, Surveillance

Second Plenary / **226**

A Systematic Review of the Performance of Machine Translation Model (A Case Study of English To Yoruba Language)

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ABSTRACT

Research in machine translation (MT) is advancing in recent times, however, concentration has been on languages with high number of speakers and abundant digital resources. Unfortunately, some languages, like Yoruba, are often left out. The study evaluates the performance of machine translation systems for English to Yoruba, focusing on statistical and neural approaches. Previous research has shown that SMT relies on statistical models, which can struggle with long-distance dependencies, idiomatic expressions, and nuanced language. NMT, powered by deep learning demand substantial computational resources and can be challenging to deploy efficiently in resource-constrained environments. The study conducts a systematic review of the SMT specifically the phrased based models and NMT for English to Yoruba text translation. In conclusion, the findings indicate that SMT and NMT perform similarly in low-resource conditions, but NMT requires careful hyperparameter

tuning to match SMT performance. Both SMT and NMT have the potential to benefit from additional data, and exploiting additional data types is a promising research direction for low-resource NMT.

Keywords: Evaluation, Kaggle, Neural machine translation, Statistical machine translation, Yoruba.

Second Plenary / 353

INVESTIGATING THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON LAW MAKING PROCESSES IN NIGERIAN NINTH HOUSE OF REPRESENTATIVE

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ABSTRACT
This study investigates the embryonic role of artificial intelligence (AI) in shaping legislative processes within the Nigerian 9th House of Representatives. Recently, AI technology has gradually permeating various sectors, including governance and understanding its impact on legislative processes is crucial. The objectives of the study were to: (i) assess the extent of AI adoption in the law law-making process of the Nigeria's ninth House of Representatives; (ii) examine the effects of AI implementation on the transparency and democratic principles within the ninth House of Representatives; (iii) critically investigate the attitude and perception of lawmakers towards the integration of AI in the legislative processes; Through qualitative and quantitative technique with key stakeholders, this study aims to elucidate the extent to which AI systems are integrated in to legislative practices, the challenges encountered and the potential benefits and implication for democratic governance in Nigeria .Three hundred and sixty (360) was used as the sample size based on the population obtained via google form. And purposive sampling technique was used while the Questionnaires were distributed after validity. The relevant data were collected and analyzed with python programming machine language indicating frequencies and percentages of the data. By shedding light on this nascent yet significant phenomenon, the study contributes to the discourse on the intersection of technology and governance in Nigeria's evolving political landscape.
Key words: Governance, Legislative, Artificial intelligence, Python

Second Plenary / 129

Interpretation of Structures from the Aeromagnetic and Aeroradiometric Fields over the Nigerian Basement Complex Province, Ilorin, Northcentral

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Abstract

This study area situated between latitude 8˚30'N and 9˚00'N and longitude 4˚00'E and 4˚30'E, presents the interpretation of both high resolution aeromagnetic and airborne gamma ray spectrometric data to provide new information about the study area. The qualitative interpretation suggests an unexposed basement complex with a weak zone likely facilitating volcanic eruption and hydrothermally altered zones associated with mineralization within the Ilorin Basement Complex. Results of the Euler deconvolution identified the depth to magnetic sources ranges from 0.01 km to 1.10 km with an average value of 0.125 km suggested for the unexposed basement complex and folds. The hydrothermally altered areas generated from ternary map of the radioelements involving K, eTh and eU are evident on granitoids and areas proximal to it indicating that granitoids are proxies of heat source. Occurrence of active mining sites in the area agrees with the generated hydrothermal alteration map of the study area with 78% agreement. It therefore shows that aeromagnetic and radiometric methods are veritable methods in delineating structures suspected to be related to mineralization but it is advisable that other methods involving gravity and electrical methods including GIS tools can be employed for further prospecting.

Keywords: Basement complex, hydrothermal altered zone, airborne gamma ray

Second Plenary / **337**

Assessing the Performance of Various Startup Incubation Models

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Abstract:

Startup incubation is essential for promoting innovation and entrepreneurship in today's fast-paced corporate world. To determine the effectiveness of various startup incubation models and identify the factors contributing to their success, the study will thoroughly evaluate each model. Using a mixed-methods approach, it combines qualitative insights from interviews with incubator managers, startup founders, and industry experts with quantitative analysis of incubator performance data. The study will examine a wide range of startup incubators, including corporate, independent, and university-based models, across different industries and regions. To evaluate the effectiveness of each incubation strategy, key performance indicators such as employment creation, money mobilized, and company survival rates are carefully examined. Additionally, the research explores the impact of variables like incubator resources, mentorship programs, accessibility to networks, and congruence with the startup's sector and location. Policymakers, investors, and entrepreneurs can benefit greatly from the knowledge that would be gained from the study regarding the advantages and disadvantages of various startup incubation schemes. It will also clarify cutting-edge tactics and best practices that can be implemented to improve incubator success. By identifying the critical success elements and comparing the effectiveness of various incubation methods, this study makes a significant contribution to efforts to foster entrepreneurship and improve economic progress via effective startup assistance programs.

Keywords: Entrepreneurship, Incubation Models, Performance Evaluation, Startup Support

Second Plenary / **179**

Modern Medicine: The Legal and Ethical Implications of Digital Transformation of Healthcare in Africa

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Abstract

Technological advancements across the world are laudable, and it extends to all areas of human existence, including healthcare delivery. Modern medicine adopts digital technologies encompassing the use of electronic health records, artificial Intelligence, and new treatment therapies. This integration of technology into modern healthcare practice has largely improved the quality of medical care, offering patients a broader range of treatment options and facile access to medical procedures that are incredibly beneficial. The adoption of technology in medicine also fosters collaboration among healthcare practitioners, enhancing patient satisfaction, and contributing positively to health development. However, despite several advantages of digital transformation, it poses challenges regarding patient privacy, data ownership, consent, access and affordability, among others. Using the doctrinal research methodology, this research examines the ethical implications of digital transformation in healthcare, exploring the disparities in the accessibility of digital technologies among lower status populations, particularly in Africa. Exploring the legal implications, this paper finds that concerns about privacy and security arise, particularly in how personal health data are collected, stored and transmitted, making them susceptible to unauthorized access and misuse. This paper also finds that continuous training and education for both patients and healthcare providers are essential to foster a better understanding and address issues of equal accessibility and confidentiality in patient care. It is thus recommended that healthcare practitioners review their policies in relation to safeguarding patient information, and healthcare institutions develop ethical guidelines to protect patient autonomy and privacy.

Keywords: Technology; Medicine; Healthcare; Legal; Ethical.

Second Plenary / 141

Isolation Of Human-Infesting Parasites In Amaranthus Viridis And Corchorus Olitorius Leaves Sold Within The Nupe Land, North Central Nigeria

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Abstract:
This study examined the prevalence of parasitic contamination in two commonly consumed vegetables (Amaranthus viridis and Corchorus olitorius) within Nupe land, focusing on five communities in Edu Local Government Area of Kwara State, Nigeria. Between January and July 2023, 250 samples were collected from farms and markets. Vegetable samples were washed with normal saline, followed by overnight sedimentation and microscopic examination after centrifugation to detect parasitic eggs, cysts, and larvae. Identified parasites included Ascaris lumbricoides, Entamoeba histolytica cyst, Taenia species eggs, hookworm eggs, Trichuris trichiura eggs, Strongyloides stercoralis larvae, and Enterobius vermicularis eggs. Ascaris lumbricoides (17.6%) was predominant then E. histolytica (11.2%), and Enterobius vermicularis had the lowest prevalence (3.2%) in farm samples. In market samples, Ascaris lumbricoides (11.2%) was most common, and E. vermicularis (1.6%) was

the least common. A total of 114 samples (45.6%) were contaminated with various parasites, with 59.2% found in farm vegetables and 32.0% in market vegetables. Corchorus olitorius showed higher contamination rates on both farms (35.5%) and markets (20.9%). July had the highest contamination rate, while January had the lowest, with significant differences observed in both farm and market samples ($P < 0.05$). Seasonal variations indicated higher contamination rates during the rainy season compared to the dry season, with significant differences noted in both market and farm samples ($P < 0.05$). The study recommends avoiding the use of untreated animal fertilizer and wastewater for vegetable fertilization and irrigation; thorough vegetable washing before consumption and measures to prevent environmental pollution from human and animal faeces.

Keywords: Prevalence, Parasitic contamination, Amaranthus viridis, Corchorus olitorius, Nupe land

Second Plenary / **181**

Impact of Foreign Direct Investment on Economic Complexity in Sub-Saharan Africa: (1991-2022 Analysis Panel Data Analysis

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Abstract:
This study investigates the relationship between foreign direct investment (FDI) and economic complexity in Sub-Saharan Africa from 1991 to 2022. Sub-Saharan Africa's potential for economic growth, driven by its youthful population and abundant natural resources, has garnered increasing attention. FDI has emerged as a key catalyst for this growth, providing essential resources for infrastructure development, job creation, and technological advancement. However, the relationship between FDI and economic complexity remains complex and multifaceted. Drawing on theoretical frameworks such as the Resource-Based View theory, Product Life Cycle theory, and Endogenous Growth theory, this study examines the mechanisms through which FDI influences economic complexity. Methodologically, panel data analysis is employed, using data from 22 Sub-Saharan African countries. Descriptive statistics, correlation analysis, and fixed effects models are utilized to analyze the data. The findings aim to contribute to the understanding of how FDI impacts economic complexity in Sub-Saharan Africa and the role of human capital development in this relationship. By addressing these questions, the study provides valuable insights for policymakers seeking to leverage FDI to promote economic complexity and diversification in the region

Second Plenary / **352**

Revolutionizing Healthcare in Nigeria: Mobile App for Monitoring and Preventing Respiratory Infections

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Abstract
This abstract explores the revolutionary potential of a mobile application for tracking and preventing respiratory illnesses in Nigeria. The need for creative solutions that can enable people and communities to take charge of their health is developing as a result of the increased frequency of respiratory illnesses and the want for better access to healthcare.The proposed technique for creating a versatile app for respiratory contamination checking and anticipation in Nigeria includes a multidisciplinary approach comprising of information integration, specialized advancement, client engagement and instruction, assessment, sending and observing. This technique emphasizes user-centric plan standards, and vigorous assessment for successful respiratory wellbeing administration.The mobile app offers positive outcomes in respiratory health monitoring, providing real-time information, enhancing awareness, and facilitating remote diagnosis and treatment. The scope of the proposal is to develop a mobile app to monitor and prevent respiratory diseases, focusing on user acceptance, internet connection, and healthcare infrastructure, though its effectiveness may be limited, whereby the app ability will be effective and also the consultations to be able to set appointment with a medical practitioner will be easy and limited

KEYWORDS
Awareness, Early warning system, Healthcare, Mobile app, Monitoring, Nigeria, Prevention, Respiratory infections.

Second Plenary / 294

Impact of Artificial intelligence on Anatomy Education

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ABSTRACT

With the relentless expansion of technological development, Artificial Intelligence and its applications breed a new era of the collaborative development in educational institutions, manufacturing industries and other official sectors globally. The integration of Artificial Intelligence (AI) into anatomy education has revolutionized traditional learning methods of cadaveric dissection, prosecution, bone maceration and plastination. More importantly, implementing artificial intelligence (AI) into medical education has the evolutionary potential to re-develop educational delivery, practice and assessment. Expanded language models, such as Chatbots and AI assistants, are currently used as virtual teaching aids to provide students with immediate personalized learning, and conduct interactive simulation learning and detection. These AI-driven platforms also provide immersive experiences through virtual dissection simulations, enhancing student engagement and understanding anatomical structures. In this paper, we discuss the impacts of AI in anatomy education and its various application levels based on case studies of teaching experiences, and discuss the advantages and disadvantages of AI in anatomy education. AI aims to skyrocket students'engagements in learning and performances via personalized assessments. However, AI faces a wide range of different challenges and limitations in Anatomy education. Importantly, Anatomy lectures must follow the technological trends with these rapid changes simultaneously studying the impacts on curriculum designs, assessment strategies and teaching methods.

Keywords: Artificial Intelligence, Anatomy Education, Technological applications, Personalized learning, Simulation, Medical Training, AI Models.

Second Plenary / 191

Gender Inequality in the Aviation Industry: The Nigerian Experience

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Abstract

Despite the global concern about the problem of gender inequality, Nigeria still grapples with apathy on the necessity for gender mainstreaming in development planning and implementation in both the private and public sectors. This study explores gender inequality within the Nigerian aviation industry. It employs a mixed-methods approach, utilizing both qualitative and quantitative data collection methods to gather comprehensive information. The analysis will be twofold, examining the issue chronologically to understand its historical development and thematically to identify key factors perpetuating the gender gap. The research aims to shed light on the underrepresentation of women in various aviation roles, from pilots and air traffic controllers to leadership positions. By presenting a multifaceted analysis of the Nigerian experience, the study seeks to contribute valuable insights for policymakers and industry stakeholders working towards achieving gender equality in aviation.

Second Plenary / 210

Modified Hybrid Approach for Direct Integration of Third and Fourth-Order Application Problems

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Abstract

Recent advancements in numerical approximation techniques have spurred the exploration of direct methods utilizing higher derivatives to tackle higher-order initial value problems (IVPs), aiming to refine numerical precision. This research introduces a third, fourth, and fifth-order derivative, three-point implicit method to directly handle general third and fourth-order ordinary differential equations. This method showcases significant efficiency improvements attributed to the implicit block approach of higher derivatives, facilitating increased order. Formulated in a block mode, the new method enables simultaneous approximation evaluation at three points, thereby bolstering implementation robustness and facilitating straightforward computation. Comprehensive analysis of the method's characteristics, including its order, zero-stability, and convergence, was conducted to ensure its effectiveness and suitability for addressing various problems. Numerical experiments validated the method's applicability to problems in physics and engineering as demonstrated.

Keywords: Collocation, Convergence, Efficiency, Higher-order ODEs, Implicit-Block Mode, Initial Value Problems (IVPs), and Interpolation.

Second Plenary / 336

Geoscience and Artificial Intelligence: The Nexus of Teaching and Research

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Abstract:

The emergence of artificial intelligence integration in the geoscience field has changed teaching and research paradigms. The relationship between geoscience and AI is multifaceted, and impacts educational approaches and scientific investigations, Among the new possibilities AI technologies might bring to the field is the opportunity to enhance teaching methodologies. Using machine learning algorithms, educators would create a learning environment that adapts to the student's knowledge, offering understanding of complex geoscientific concepts and increased student engagement. AI-enabled simulation would allow students to experience geospatial data and phenomena by immersion, offering a hands-on experience that goes beyond the scope of the classroom. Additionally, the use of AI in the research expands scientific endeavour.

Furthermore, the incorporation of AI developments into geoscience research has significantly broadened the scope of scientific inquiry. Machine learning models have been used to help examine vast datasets to establish complex patterns and extract useful information from geological, meteorological, and environmental datasets. For this reason, the combined predictive modeling and data integration can further enhance the accuracy of forecasting natural hazards and climate change event and geological processes such as those that permit risks to be minimized and facilitate evidence-based decision-making.

In conclusion, the merging of geoscience and AI features a vibrant combination of teaching and research. By leveraging AI solutions, both educators and researchers will benefit from an expansion of possibilities connected to the dissemination of knowledge, comprehension, and creativity in the geosciences, broadening our knowledge of Earth systems and sustainable management.

Keywords: Artificial Intelligence, Geoscience, Machine Learning, Simulation, Predictive Modelling.

Second Plenary / 241

Development of an AI Enhanced Dark Web Monitoring System

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ABSTRACT:

The internet is not just about the websites we usually see, it also has a hidden part called the Dark Web or Onion Site. The hidden attribute makes this segment of the internet to be confidential and inaccessible through conventional search engines. Studies reveal that this part of the internet now serves as the origin of growing cybercrime and other illicit activities, such as weapon trading, human trafficking, drug trafficking, terrorism and so on. This calls for an improved approach to early detection and prevention of cybercrime and other illicit activities. This study developed a system that crawls the dark web content for monitoring and analysis to detect cybercrime and some selected illicit activities. The machine learning models used in this study are Support Vector Machine, Naïve

Bayes and Random Forest which forms an ensemble voting approach. In the experiment, four (4) onion site was used only one (1) was not involved in illegal activities while each of the three (3) remaining was used for Human Trafficking, Cybercrime and the production of Counterfeit Money respectively. The model returns an accuracy of 95% compared to 93% found in the literature. For future work, this study will train the model on the identification of more forms of cyber-attacks and illegal activities.

Keywords: Dark Web, Onion site, Machine Learning, Cyber Attack, Web Crawling

Second Plenary / **402**

Production of Kojic Acid by Aspergillusniger (PP330720) and Peniciliumdigitatum (PP461997) Grown on Guinea Corn (Sorghum bicolor) Sheaf as Sole Carbon Source

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ABSTRACT

Kojic Acid (KA) is globally relevant in the cosmetic, medical, and food industries, production optimization to mitigate cost, maximize profit and manage waste through eco-friendly and sustainable alternatives is imperative. This research sought to investigate the suitability of resident moulds grown on guinea corn sheaf (GCS) as sole carbon source for KA production. Resident moulds were isolated, identified and screened for KA production through standard methods. Promising moulds were adopted for kojic acid production in SSF for 9 days and assay was done daily using commercial kojic acid as standard. Response surface methodology was utilized to optimize some fermentation process variables. The functional groups in extracted KA were determined with FTIR. Aspergillusniger, Rhizopusstolonifer, and Penicillium digitatum were identified and confirmed with the accession number PP330720 and PP461997 for A. niger and P. digitatum respectively. Fermentation for 9 days, substrate concentration of 30 g/l, inoculum size of approximately 2.1 x 10ˆ9 spores/ml, moisture content of 30 ml, mineral supplement of 6 g/l, pH of 6.82 and temperature of 27.5 oC were identified as the best conditions for maximum kojic acid yield. A. niger and P. digitatum were used for fermentation. Kojic acid concentration was similar by the two isolates (1.85±0.07 –6.80±0.00) until day 7 when Penicillium and digitatum demonstrated higher kojic acid concentrations (7.28±0.00 mg/ml). Alkyl, hydroxyl and carboxylic acid groups were found in the KA produced. The research suggests the suitability of GCS as substrate for KA production and the isolated moulds as potential organisms.

Key Words: Kojic Acid, Guinea Corn Sheaf, Solid-State Fermentation, Moulds

Second Plenary / **256**

Domestic Politics and its implication for Nigerian Educators

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ABSTRACT:

This study examines domestic politics on education, bringing to bear its antecedents on education in terms of the political behaviours often exhibited by the ruling class in respect of education. The educational reforms were discussed, spotting politics as the underlining machine for determining its efficacies and performances. The implication of politics on the education sector in inducing and mitigating clashes laid the foundation for understanding the gravity of bad and good politics, and their antecedents on the growth and development of education in Nigeria. The result of the study, through critical analysis, reveals that politics contributed positively in the emergence of the premier university but was wrongly deployed in the creation of more universities. It also discovers that the political motives or interests that informed the expansion of universities created a yawning gap between the real needs in university education and the political expediency for the establishment of universities. Based on the findings, and as strategies or measures for new frontiers in university education in Nigeria, the paper recommends, among other things, that Nigerian educators need to take the issues of politics seriously, to ensure that it is not left in the hands of mediocre to prevent the defilement of education.

Keywords: Politics, Education, Interests, Politics on Education.

Second Plenary / 339

Classification of Lung Cancer Disease using Mask-Rcnn and Convolutional Neural Network

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Abstract:

Lung cancer remains a significant global public health challenge, necessitating enhanced diagnostic methods for timely detection and treatment. This study introduces a novel deep learning method for detecting lung cancer from chest X-ray images in order to address current issues with accuracy and efficiency. Although prior studies have investigated several machine learning and deep learning techniques, such as convolutional neural networks (CNNs), and instance segmentation models like Mask R-CNN, there are still gaps in attaining the best results for lung cancer identification. Our approach combines CNNs for classification tasks with the Mask R-CNN architecture for instance segmentation, enabling accurate localization and identification of lung cancer lesions. The performance metrics of accuracy, F1 score, and area under the curve (AUC) were used to assess the classifier on a dataset of X-ray pictures from patients with normal, malignant, and benign cases related to lung cancer. Preliminary results show encouraging performance, suggesting our techniques potential for precise and effective lung cancer diagnosis.

Keywords: Classification, CNN, Deep Learning, Lung Cancer, Mask-RCNN

Second Plenary / 271

Empowering Global Entrepreneurs: Arden University's Initiative for Start-Up Incubation

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Abstract:

The paper detailed how the Arden Enterprise Incubator (AEI) collaborated with industry partners and overseas institutions to enhance students'entrepreneurial mindsets and skills, through a range of synchronous and asynchronous co-curricular learning activities delivered through a hybrid of online and physical events and meetings between students, mentors, guest speakers and instructors. Through the AEI, Arden students had the opportunity to develop and pitch their business ideas, being evaluated on the practicality of the business models, the viability of revenue drivers and the growth potentials. Such collaboration between the faculty and students also demonstrated how Arden's distance learning model successfully leveraged its global network to innovate and create economic value. AEI also actively encouraged students to address customer needs of different ethnicity, gender and income strata, thereby promoting six of the Sustainable Development Goals (SDGs): No Poverty (SDG1), Quality Education (SDG4), Gender Equality (SDG5), Decent Work and Economic Growth (SDG8), Industry, Innovation and Infrastructure (SDG9), and Reduced Inequalities (SDG10), as advocated by the Department of Economic and Social Affairs of the United Nations.

Building on the success of AEI, Arden University proposed to expand its scope and offerings to support aspiring entrepreneurs across the globe. Such initiatives would echo the KU8's priority theme of Entrepreneurship and Start-Up Incubators in the areas of engagement and impact; teaching and learning; research and partnerships. To further the partnership with the higher education sector in the Commonwealth, Arden University would collaborate with a partner institution to host a virtual workshop that replicated the AEI model with contextualised content and guest speakers from the local economy.

The workshop aimed to foster collaboration and partnerships between academia and industry, empower participants to develop entrepreneurial business ideas and equip participants with the knowledge, skills, and resources to address global challenges through entrepreneurial activity. Spanning six months, the workshop would include activities such as master classes, videos and podcasts, bootcamps, and seminars, summated by a pitching competition where participating students presented their original business ideas to judges consisting of a panel of international industry practitioners and academics. The winning team would then receive one-on-one mentorship in the ensuing months to be guided on the actual implementation of their business plan.

Keywords: Entrepreneurship, Sustainable development, Innovation, Inclusion, International collaboration, Education.

Second Plenary / **287**

Exploring the Nexus between Electoral Violence, Family Dynamics, and Women's Political Engagement: A survey from Nigeria

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Abstract:

Democracy in developing countries is often characterized by electoral violence. A huge level of violence affects women in Nigerian politics and several research have found that men and women experience electoral violence differently, albeit men still participate actively in elections. This research seeks to examine how family dynamics influences women's participation in the face of electoral violence. I employ a survey to ask 791 respondents if they would allow female relatives to participate in violent elections. This was analyzed using a logistic regression and findings revealed that violence deters women from participating in elections. Also, women get prevented from political participation by family and loved ones. This reinforces patriarchal superiority and also explains why women may have low political ambitions.

Keywords: women, politics, violence, elections, democracy

Second Plenary / 340

Fixed Point Strategies over Continuous Functions in Fussy Set

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Abstract:

This study introduces fixed point strategies specifically over continuous functions within the context of fuzzy sets, a generalization that encapsulates uncertainty and vagueness inherent in many real-world scenarios. By integrating fuzzy set theory, which allows for the gradual assessment of membership levels rather than binary inclusion, we explore the adaptation of classical fixed point theorems to fuzzy environments. We focus on continuous functions defined on fuzzy metric spaces, leveraging the inherent flexibility and robustness of fuzzy sets to extend traditional fixed point results. The research outlines essential conditions under which fixed points exist for these functions and examines their uniqueness and stability properties. This study not only broadens the theoretical understanding of fixed points in fuzzy contexts but also provides a valuable toolkit for addressing complex issues where precision and certainty are not readily available. Our results indicate that the incorporation of fuzzy set theory into fixed point strategies not only retains the core advantages of classical approaches but also significantly enhances their applicability in handling real-world complexities.

Keywords: Fixed point, fuzzy sets, continuous functions, fuzzy metric spaces, uncertainty, stability.

Second Plenary / 288

Do educational qualifications matter for women's decisions to contest elections? a field study from Nigeria.

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Abstract:

Several factors affect women's political candidacies in Nigeria and low educational qualification has been one of these. This has been extensively researched in other democracies. The Nigerian political space represents a unique case to examine if educational qualifications improve women's decision to contest political offices. Using a survey method, we ask politically-active women to rank the challenges they face, then, we find the relationship between their educational qualifications and contesting political offices using a linear regression. Findings reveal no relationship between educational qualification and decisions to contest political offices as these women are familiar with party nomination processes.

Keywords: education, qualifications, gender, political participation, election

Second Plenary / 301

Leveraging Artificial Intelligence to Transform Educational Development in Nigeria: Opportunities, Challenges, and Implications

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Abstract:

Artificial intelligence (AI) holds immense potential to revolutionize educational development in Nigeria, offering opportunities to enhance learning outcomes, personalize learning experiences, and support educators in delivering quality instruction. This study explores the integration of AI into the Nigerian educational landscape, highlighting its benefits, challenges, and implications. Drawing from existing literature and examples of AI applications in education, the study presents a comprehensive overview of how AI can reshape teaching and learning practices. Additionally, it addresses the importance of balancing AI advancements with the development of human intelligence to ensure holistic educational outcomes. The study also discusses the potential impact of AI on educational equity, access, and inclusivity. Overall, this study contributes to the discourse on AI in education and offers insights into harnessing its transformative potential in Nigeria.

Keywords: Artificial intelligence, Educational Development, Learning outcomes, Personalized learning, Teacher support, Equity, Inclusivity

Second Plenary / 397

Principals' Administrative Role on Teachers' Job Performance in Private Secondary Schools in Ilorin South Local Government Area, Kwara State

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Abstract

The study assessed principals'administrative role on teachers'job performance in private secondary schools in Ilorin south local government area, kwara state.The study was guided by 3 purposes with 1 research question and 2 hypotheses. The research design that was used for this study was descriptive survey of correctional type method. The population of the study consisted of 180 respondents from private secondary schools. The sample for this study was selected using Purposive sampling technique. The sample consisted of 30 principals and 150 teachers from 30 private secondary schools in Ilorin South Local Government Area, Kwara State. The instruments that were used for data collection were called Principals'administrative roles Questionnaire (PARQ) and Teachers'Job Performance Questionnaire (TJPQ)which were filled by principals and teachers. The questionnaires consisted of 33 items constructed based on 4-point Likert's scale and High, moderate and low. The instrument was validated by my supervisor and two experts in the department of Education Management and Counselling in Al-hikmah University. Test-retest method was used to determine the internal consistency. A reliability coefficient of 0.76and 0.87 was obtained Descriptive statistics of mean, standard deviation, frequency and percentage were used to answer the research questions while PPMC was used to test the formulated null hypotheses at 0.05 level of significance. The findings of the study revealed that there is a no significant influence of principals'supervisory role on teachers'job performance in private secondary schools in Ilorin south local government area, kwara state. One of the recommendations of this study is the need for principals to develop series of supervisory strategies such as regular classroom visitation, coaching of newly employed teachers, and guiding teachers with teaching deficiencies to help teachers acquire the necessary skills needed for effective job performance

Second Plenary / 383

Influence of Human Activities on Heavy Metal Concentrations in Vendor Vegetables in Major Ilorin Markets, Kwara State, and Their Health Implications

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The study examines how human activities affect the concentrations of heavy metals in vegetables sold by vendors at major markets in Ilorin, Kwara State, Nigeria, and investigates their potential health consequences. A total of thirty-six vegetable samples were collected from six major markets and analyzed using the wet digestion and spectrophotometry method to determine their heavy metal content. The findings reveal elevated levels of heavy metals, including lead (Pb), cadmium (Cd), chromium (Cr), and mercury (Hg), in the sampled vegetables, surpassing permissible limits established by international food safety standards. Specifically, Pb concentrations were found to be 0.35mg/kg- 0.95mg/kg, Cd concentrations exceeded (0.2 mg/kg), Cr levels were 1.94mg/kg -3.10 mg/kg, and Hg levels were 0.01mg/kg -0.015 mg/kg on average across the samples. Sources of contamination were identified as anthropogenic activities such as vehicle emissions, industrial operations, and improper waste disposal practices in proximity to market areas. These findings indicate a concerning contamination of vegetables sold in the markets, posing potential health risks of

consuming these contaminated vegetables were evaluated and highlighting potential risks such as heavy metal toxicity, carcinogenicity, and developmental disorders, particularly among vulnerable groups such as children and pregnant women Recommendations include enhancing waste management practices, enforcing stricter regulatory standards, and launching public awareness campaigns to reduce exposure risks and ensure food safety in market settings

Keywords: heavy metals, vegetables, human activities, Ilorin markets, health implications

Second Plenary / **227**

Prediction of Malaria Using Cnn and Svm: A Systematic Review

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Abstract

Malaria is a life-threatening infectious disease caused by parasites of the Plasmodium genus. Malaria remains a global health challenge, with early and accurate diagnosis playing a crucial role in effective disease management. Hence, early detection of malaria is critical to avoiding complications and lowering healthcare costs. This review article aims to compare previous works that used various machine learning and deep learning models in predicting malaria. The models' accuracy, precision, and recall, as well as their advantages and limitations, are all discussed. The difficulties encountered in applying machine learning models for malaria prediction, as well as potential solutions, are also discussed. The article emphasizes the importance of ongoing research in this area as well as the advantages of using Convolutional Neural Network (CNN) models to improve early detection and management of malaria in developing countries.

Keywords: Malaria, CNN, SVM, Health, Artificial Intelligence, Machine Learning, Disease

Second Plenary / **392**

AI for Sustainability and Creativity: It's Impact on Language Learning Skills

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Abstract

This paper explores the intersection of artificial intelligence (AI), sustainability, creativity, and language learning skills. The rapid advancement of AI technology has led to its integration into various aspects of our lives, including education and language learning.
This paper examines how AI can be leveraged to promote sustainability and creativity in language learning, thereby enhancing language acquisition and proficiency.The discussion begins with an overview of the current landscape of AI applications in language learning, highlighting the potential benefits and challenges. It then delves into the role of AI in promoting sustainable language

learning practices, such as reducing paper usage through digital resources and enabling personalized learning experiences. Additionally, the paper explores how AI can foster creativity in language learning by providing interactive and adaptive learning tools.
Furthermore, the paper investigates the impact of AI-driven language learning platforms on learners' linguistic and cognitive skills, emphasizing the potential for personalized feedback, adaptive learning paths, and immersive language experiences. It also addresses ethical considerations and potential limitations associated with the integration of AI in language learning.Overall, this paper aims to provide insights into the transformative potential of AI in promoting sustainable and creative language learning practices, ultimately contributing to enhanced language proficiency and cross-cultural communication in an increasingly interconnected world.

Keywords: Artificial Intelligence, Creativity, Language Learning, Skills, Sustainability.

Second Plenary / 382

Impact Of Organizational Climate On Lecturers'Job Satisfaction In Public Colleges Of Education In Nigeria: Empirical Evidence From Kwara State

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Abstract
This qualitative study explores the impact of organizational climate on lecturers' job satisfaction in public colleges of education in Nigeria. The research employed semi-structured interviews with 10 lecturers from the three public colleges of education in Kwara State to gather rich, descriptive data. Thematic analysis was used to identify patterns and themes related to how organizational climate factors such as leadership style, physical environment, and job autonomy influence lecturers' perceptions of job satisfaction. Findings indicate that a positive organizational climate characterized by supportive leadership, conducive physical environment, and high job autonomy enhance lecturers' job satisfaction. Conversely, negative aspects such as autocratic leadership, poor communication, excessive workload, and lack of autonomy diminish satisfaction levels. Lecturers emphasized the importance of a conducive work environment where their contributions are valued and where they can actively engage in decision-making processes. This study contributes to the existing literature by providing nuanced insights into the specific organizational climate factors that significantly impact lecturers' job satisfaction in Nigerian public colleges of education. Practical implications include recommendations for educational administrators to foster a supportive climate that enhances lecturers' well-being and overall job satisfaction, thereby potentially improving educational outcomes and institutional effectiveness.
Keywords: Organizational climate; leadership practices; physical environment; autonomy; job satisfaction

Second Plenary / 408

THE IMPACT OF ENTREPRENEURIAL EDUCATION ON UNDERGRADUATE STUDENTS' ACCESS TO ENTREPRENEURIAL RESOURCES AND SUPPORT IN AL-HIKMAH UNIVERSITY

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Abstract
This study investigates the impact of entrepreneurial education on undergraduate students' access to entrepreneurial resources and support in Al-Hikmah University. A mixed-methods approach was employed, combining both quantitative and qualitative data. The results show that entrepreneurial education significantly enhances students' access to resources such as mentorship, funding, and networking opportunities. Furthermore, the study reveals that entrepreneurial education improves students' awareness and utilization of support services, including incubators, accelerators, and entrepreneurial clubs. The findings suggest that entrepreneurial education plays a crucial role in bridging the resource gap faced by young entrepreneurs, thereby promoting entrepreneurial success. The study recommends the integration of entrepreneurial education into the university curriculum to foster entrepreneurship and economic growth in Nigeria.
Keywords: Entrepreneurial Education, Resource Access, Support Services, Undergraduate Students, Al-Hikmah University.

Second Plenary / **342**

Structural, Dielectric and Raman Spectroscopy of La3+ Ni2+ Zn2+ Substituted M-Type Strontium Hexaferrites

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Abstract:

In this work, M-type strontium nano-hexaferrites with chemical composition Ba0.8–xSr0.2LaxFe12–x–yNixZnyO19 (x = 0.00, 0.05, 0.10; y = 0.00, 0.08, 0.16) are prepared using sol–gel auto-combustion technique. The formation of single phase hexagonal ferrites is confirmed from XRD analysis. It also reveals the presence of magnetite and the crystallites sizes are in the range of 21.31–29.91nm. The lattice constants are found to decrease with an increase in cation substitution. The FTIR spectra of the sample show three dominant peaks in the range of 400–600 cm–1 which indicate the formation of the desired hexaferrite structure. The field emission scanning electron microscope images reveal large crystallites with shapes close to the hexagonal platelet-like whose sizes are non-uniformly distributed. Also, agglomeration is observed due to magnetic interactions between the crystallites. The dielectric constant, dielectric loss, conductivity, and dielectric modulus are analyzed using the Maxwell–Wagner model. Dielectric constant is enhanced at high frequency in the entire sample and reduction of dielectric loss is also observed with further cations substitutions.

Key Words: Nano-hexaferrites, magnetite, dielectric, M-type hexaferrites.

Second Plenary / **343**

Improve Artificial Intelligence Model for Cybersecurity Incident Response and Recovery System

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ABSTRACT:

Cybersecurity incident response and recovery systems are currently facing a number of challenges that are different from the fast growth of advanced cyber threats to the complexity faced in coordinating an effective response across the various technological environments. Several techniques have been developed, but there are problems in the detection and mitigation of emerging threats in real-time, thus, organizations are at risk of data breaches, financial losses, and reputational damage. This study presents an improved Artificial Intelligence model that assists in effective incidence response and recovery from previously known and unknown threats. The bagging ensemble approach is adopted using Naïve Bayes, Decision Tree, Support Vector Machine and Neural Network as base classifiers to form the model. In the experiment, the dataset used has a total of 22544 instances and 42 attributes. The result gives 98.69% accuracy with ROC and PRC Area both 0.999. The Recall and F-Measure are both 0.987.

Keywords: Machine Learning, Incident Response, Recovery Systems, Cyber Attack, Bagging

Second Plenary / 401

Active constituent in aqueous extracts of Ficus exasperata stem-bark grown in agro-economic areas of Kwara-South Nigeria

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Abstract

Ficus exasperata leaf has traditionally been reported for managing hypertension and controlling insect pests in the agro-economic areas of Kwara-South, Nigeria. The objectives of this study were to extract phytochemical components from Ficus exasperata leaves and stem-bark, evaluate the in-vitro antifungal activity of aqueous extracts against Fusarium solani, the causative agent of root-rot in crops, and identify the major active constituents in the bioactive extracts. The yields of extracted phytochemicals in aqueous leaf and stem-bark extracts of Ficus exasperata were 32.2% and 21.97%, respectively, while protein contents were 12.50% and 5.58%, respectively.Using the agar well diffusion method, the aqueous stem-bark extract of Ficus exasperata exhibited significant inhibition of 76.51% at 50 mg/ml against mycelial growth of Fusarium solani compared to the control (Fluconazole). However, no significant zone of mycelial inhibition was observed for the aqueous leaf extract at concentrations of 10, 25, and 50 mg/ml. Preliminary phytochemical screening showed that the

aqueous stem-bark extract contained high levels of flavonoids and alkaloids. Similarly, the total phenolic content and flavonoids obtained in the aqueous stem-bark extract were 4.09 mg GAE/100 g and 0.04 mg QE/100 g, respectively.Moreover, gas chromatography-mass spectroscopy (GC-MS) analysis for identifying principal active constituents revealed 18 different components in the aqueous stem-bark extract, with linoelaidic acid (21.81%) being the most abundant, followed by butanoic acid (15.25%). Therefore, the aqueous extract from the stem-bark of Ficus exasperata may be considered a valuable source of promising pharmaceutically active constituents or antifungal agents.

Keywords: Ficus exasperata; stem-bark; active constituent; root-rot; linoelaidic acid

Second Plenary / **385**

Drivers Of Auditors'Inclination Towards Accountability And Transparency In The Nigerian Public Sector

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Abstract

The issues of accountability and transparency have been a major focus in the enthronement of sound public finance management (PFM) globally. Given the inconsistencies in the Nigerian PFM system and expected role vested on auditors externally and internally as officers in the Supreme Audit Institutions (SAIs) and Treasuries respectively, their proclivity towards evidential accountability and transparency in the Nigerian public sector is examined. This is exhibited in terms of determining factors prompting auditors towards accountability and transparency. The study relies on cross-sectional survey design achievable via close-ended questionnaire on a 6-point Likert scale to collect data. The responses of 302 auditors across Federal and Kwara State ministries, departments and agencies (MDAs) are analysed using partial least square structural equation modeling (PLS-SEM) to test the study's five hypotheses formulated. The findings show that all the identified factors except human resource factors positively explain Nigerian public sector auditors'inclination towards accountability and transparency. However, among the factors with positive impact, audit facilities factors, external factors and the regulatory and institutional reform factors are superior given their statistical significant coefficients. This suggests that audit facilities factors including access to advanced digital technologies, external factors including little or no political class influence and the institutional and regulatory reform factors including effective whistle blowing policy and adoption of global best practices in PFM are catalysts of public sector auditors'disposition to accountability and transparency in Nigeria. Thus, to institutionalise accountability and transparency through public sector audit, huge investments have to be made in the 21st century audit facilities and adoption of global best practices in public sector audit should be all-inclusive rather than parochial among other policy-changing suggestions.

Keywords: Accountability, Public sector auditors, Regulatory reforms, Audit facilities, Political influence

Second Plenary / **263**

Sociocultural Perspective on Sexual and Reproductive Health of Adolescents in Nigeria

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Abstract:

This study explores the sociocultural factors influencing the sexual and reproductive health (SRH) of adolescents in Nigeria. Adolescence is a critical stage of development where individuals experience physical, emotional, and psychological changes, often coupled with curiosity and experimentation in sexual matters. However, in Nigeria, adolescents face numerous challenges regarding SRH due to entrenched sociocultural norms and practices. This study examines how cultural beliefs, religious influences, gender dynamics, socioeconomic factors, and educational disparities intersect to shape adolescents' SRH outcomes in Nigeria. Through a comprehensive review of existing literature and qualitative insights, we highlight the implications of these sociocultural factors on adolescent SRH behaviors, access to SRH services, and outcomes such as early pregnancies, sexually transmitted infections (STIs), and unsafe abortions. Furthermore, the study discusses potential strategies for addressing these challenges, including culturally sensitive and gender-responsive interventions, comprehensive sexuality education, community engagement, and policy reforms. By understanding and addressing the sociocultural determinants of adolescent SRH, stakeholders can develop more effective and sustainable interventions to promote the sexual and reproductive well-being of Nigerian adolescents.

Keywords: Adolescents, Sexual and Reproductive Health, Sociocultural Factors, Nigeria, Gender Dynamics, Cultural Beliefs, Comprehensive Sexuality Education.

Second Plenary / 390

Preparation and Characterization of eco-friendly Graphene Oxide from Agricultural Wastes

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Abstract
Industrial effluent contamination of natural water bodies has emerged as a major challenge in developing and densely populated countries like Nigeria. This has often rendered these natural resources unsuitable for both primary and/or secondary usage. Herein, we reported the preparation and characterization of graphene oxide (GO) from kola pods and sour sop seeds using modified Hummer's method. The prepared GOs were characterized using X-ray powder diffraction spectroscopy, Scanning Electron Microscope coupled with Energy Dispersive X-Ray, X-Ray Fluorescence, Fourier Transform Infrared Spectroscopy and Brunauer-Emmett-Teller. The properties of the synthesized GOs were compared with a commercial GO. The spectroscopic techniques and the elemental composition confirmed the successful preparation of GO from the materials. The surface area of one of the prepared GO was 254.899 m2/g and found to be higher than the commercial product of 198.920 m2/g. The results of the study suggest that the prepared GOs can be used for different environmental applications.

Keywords: Graphene oxide; Agricultural wastes; Spectroscopic techniques; Surface area.

Second Plenary / 424

Prediction of Liver Disease Using a Hybrid Approach

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Abstract

This study develops a hybrid predictive model for liver disease using a combination of Decision Tree and Naive Bayes classifiers. The model is trained on a public dataset from Kaggle Repository, comprising over 11,000 instances, and evaluated using performance evaluation metrics such as accuracy, precision, recall, and f1-score. The results show that the hybrid approach achieves an accuracy score of 98%, precision score of 98%, recall score of 98% and an F1-score of 98%, outperforming the individual classifiers. However, this is likely due to the dominance of the Decision Tree classifier, which suggests that it is an optimal classifier for predicting liver disease. The study concludes that combining Decision Tree with Naive Bayes does not significantly improve performance, and highlights the need for further research into the application of machine learning techniques in this field to improve predictive accuracy and clinical decision-making. The findings have important implications for the development of predictive models for liver disease and personalized medicine.

Keywords: Liver disease, Hybrid approach, Decision Tree, Naïve Bayes

Second Plenary / 209

Immunotherapy: Hope for Cancer Therapy

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Abstract

One major function of the immune system other than fighting infections is immunoediting: a process by which cells that fails to maintain G0 are eliminated from the system to prevent the development of cancer. Cancer emanates when transformed cells circumvent this immune function by various methods. The understanding of this function and pathway is revolutionizing cancer therapy. Immunotherapy seeks to reactivate the immune system to its natural function of immunoediting and immunosurvelance as such facilitating adequate clearance of transformed cells. This approach entails the use of check point inhibitors, cytokines, adoptive cells therapy, vaccines and monoclonal antibodies. Though this approach has been around for some decades, it is just beginning to grader much recognition. This review highlights some of the approaches and trends in immunotherapy. Immunotherapy may elicit a better immune system response if implemented while the patient has a reasonable degree of immunocompetence, usually consistent with lower tumor burden. Since immunotherapy offers a different mechanistic approach from traditional treatments, there is potential for synergy with other traditional treatments, such as chemotherapy, radiation, and hormonal therapy (e.g. androgen ablation). The combination of different treatment methods holds significant potential to improve treatment outcomes.

Key words: Check point blockers, adoptive cell therapy, immunoediting, immunosurvellance.

Second Plenary / 376

Convolution Neural Network (CNN) for Handwritten Signature Verification- A Review

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ABSTRACT
Human signature verification is the technique of confirming the user's identity by as a kind of behavioral biometrics, employing the user's handwritten signature. Many studies have been done in automatic handwritten signature verification using different artificial models. An empirical review on these studies is conducted to identify various methodologies that have been used in verification of handwritten signatures. It is observed that CNN Model has higher percentage of usage and performs well in the verification of handwritten signatures based on some metrics and the algorithms majorly used is either VGG16 Architecture or Inception V1 architecture (GoogleNet) Algorithm. Majority of the studies used Feature extraction for classification analysis. This study is based on offline signatures forgery detection method.

Keyword: Signature, VGG16 Architecture, Inception V1 Architecture, Feature extraction, Classification analysis, Forgery detection.

Second Plenary / 373

Chemometrics of Isotherm modeling for Adsorption of Cu(II) Endocrine Disruptive Heavy Metal onto B-nZVI Nanocomposites

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Abstract
This study investigated the chemometrics of isotherm modeling for adsorption of Cu(II) onto B-nZVI at experimental conditions, pH 6, temperature 298 K, B-nZVI adsorbent dosage 0.1 mg, contact time 60 min with 98% percentage removal efficiency. Equilibrium data were analyzed using combination of two and three parameters isotherm modelings: Langmuir, Freundlich, Temkins, Dubinin-Kaganer-Raduskevich, Redlich-Peterson, Sips, Toth, Khan, Hill. Equilibrium data were best described by Langmuir judging from the correlation coefficient (R2) as validated by low values of SSE, ⊠2, and HYBRID statistical error model. The maximum quantity adsorption capacity (Qmax) of B-nZVI for Cu((II) adsorption surpassed those other nanocomposites previously used for Cu((II) adsorption when compared. The study established the need to validate values obtained from R2 utilizing statistical tools before judging the best model.

Keywords: Chemometrics; Isotherm Modeling; Statistical validity

Second Plenary / 367

Optimizing Predictive Accuracy: A Study of KNN with Varied Distance Functions in Student Performance Analysis

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Abstract

The motivation behind this study stems from the pressing need to address the issue of an efficient model to predict student performance with minimum University admission requirements for an M.Sc. programme in a computer science programme. Unlike other popular algorithms, the K-nearest neighbor (KNN) algorithm with Euclidean distance function is commonly used for modelling students'performances. However, there is a lack of research that directly compares KNN performance across its distance function in this context. This study seeks to bridge this gap by investigating the most efficient distance function in KNN for predicting students'performances in the context of computer science programme performances. The objective of this research is to conduct a comparative analysis of the performance metrics of KNN with different distance functions for predicting students'performances. The KNNs with different distance functions are modeled using 10-fold cross-validation in the WEKA tool, allowing for a comprehensive evaluation of their performance metrics. The study utilizes data sourced from the Department of Physical Sciences Al-Hikmah University Ilorin-Nigeria, from 2009-2015 on student academic performance in the Computer science programme. The findings of the study reveal that KNN with Manhattan distance outperforms other KNN distance functions in terms of better accuracy, precision, recall, F-measure, and ROC Area, with the lowest error rate in predicting student performance. However, all KNN distance function exhibits the same processing time. The study concludes that KNN with Manhattan is more efficient for accurately predicting students'performance in a computer science programme than the other KNN distance functions considered in this study. The study therefore recommended the utilization of KNN with Manhattan for predicting students'performance, acknowledging its superiority in this context.

Key words Student performance, KNN with varied distance functions, Modelling, Accuracy, and WEKA

Second Plenary / 370

Ocimum gratissimum for Phytoremediation of Endocrine Disruptive Malachite Green Dye: Kinetics and Thermodynamics Studies

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Abstract

Dye solution generated from various anthropogenic activities has been identified to be toxic, mutagenic and carcinogenic and eventually adulterate the quality of water solution thereby militating against the actualizations of some sustainable development goals. In this study, Ocimum gratissimum leave (OGL), a low cost and readily available phyto-sorbent was applied for the phytoremediation of malachite green dye (a candidate of endocrine disruptive compound). OGL was characterized by physicochemical properties having pH (6.7), % moisture content (7.3%), bulk density (0.457), PZC (6.65). Functional groups and morphology were determined by fourier transformed infrared (FTIR) and scanning electron microscopy (SEM) respectively. The phytoremediation of MG dye was investigated in a batch technique under the following conditions: pH (1 –10), initial concentration (50 – 500 ppm), effect of temperature (298 –338 K), and contact time (5 –120 min). Equilibrium data were better fitted to both Freundlich and Langmuir isotherm model while pseudo second-order model best described the kinetic model with the mechanism pore dependent. Thermodynamics parameters (enthalpy, entropy and Gibb's free energy) showcased the biosorption process to be endothermic, feasible and spontaneous in nature with degrees of randomness. The study demonstrated the promising capacity of ocimum gratissimum as low-cost phyto-sorbent finding relevance in the waste-water remediation, particularly endocrine disruptive compound.

Keywords: Endocrine disruptor; Ocimum gratissimum; Phytoremediation; Kinetics and Thermodynamics

Second Plenary / 371

Effect of Operational parameters on Photocatalytic degradation of Ibuprofen Pharmaceutical using Coconut shell Activated Carbon Doped ZnO Nanocomposites

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Abstract
In the last two decades, pharmaceutical compounds are reportedly found even in drinking water thereby adulterating the water resources'quality and rendering it unacceptable for many applications. Based on the influence of the pharmaceutical waste in alteration of hormonal coordination, they have been categorized as endocrine disruptive in nature hence the need to their effective removal from wastewater. In this study, coconut shell activated carbon doped zinc oxide nanocomposite (CSAC/ZnO) was successfully synthesized via hydrothermal techniques. CSAC/ZnO was characterized by BET surface area 320.65 m2g-1, band-gap (3.22 –3.09 eV) from UV-DRS, Phase transition from TGA, crystallinity by XRD, functionality by FTIR, morphology, a combination of spherical and rod-like shape determination as well as elemental determination and electron-mapping using SEM, EDX, and HR-TEM and chemical conformation by XPS. Photocatalytic degradation of Ibuprofen (IBP) was influenced by effect of initial concentration, pH, catalyst dosage and irradiation time. Best degradation efficiency of 98% was achieved with 40 mg, pH 5, irradiation time 180 min over the range of concentration 1 –5 ppm. LC-MC profile confirmed the fragmentation of IBP molecule as evidence of photocatalytic degradation. The study successfully showcased the efficacy of CSAC/ZnO as effective photocatalytic for degradation of IBP and it can be recommended for other pharmaceutical wastes.

Keywords: Doped ZnO Nanocomposites; Photocatalytic degradation; Operational Parameters; Pharmaceuticals

Second Plenary / 216

Community Policing and the Management of Public Health Crises: Lessons from the Covid-19 Pandemic in Nigerian Communities

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Abstract:

The COVID-19 pandemic has highlighted the crucial connection between public health emergencies and community policing initiatives in Nigeria. This study examines the effectiveness of community policing in handling public health emergencies, specifically focusing on the Nigerian context during the COVID-19 pandemic. The study investigates the impact of community policing on enforcing health guidelines, distributing information, and promoting community resilience during the pandemic, using qualitative research methods such as interviews, observations, and document analysis. The findings indicate that community policing helped promote adherence to public health initiatives at the local level. Community police officers served as mediators between government agencies and local communities, cultivating trust and collaboration in the implementation of pandemic control measures. Furthermore, community policing activities, such as neighborhood watch groups and community engagement programs, played a crucial role in spreading accurate health information, debunking false information, and tackling difficulties specific to the community. Resource restrictions, institutional cooperation, and community distrust were recognized as obstacles to the successful use of community policing during the pandemic. The study emphasizes the importance of increased cooperation among law enforcement agencies, healthcare authorities, and community leaders to improve the effectiveness of community policing in handling future public health emergencies. This study offers useful insights into the synergies between community police and public

health crisis management, providing recommendations to maximize community policing techniques for improved planning and response to future health emergencies in Nigerian communities.

KEYWORDS: Community policing, Public health crises, Post-conflict environments Fragile environments, Development impacts, Police-community relations, Pandemic.

Second Plenary / 338

Classification of Brain Tumors Using Yolov8 and Pre-Trained Cnn Models

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Abstract:

The inadequate precision of current diagnostic approaches highlights the ongoing importance of brain tumour detection as a worldwide health concern. Thus, using forefront deep learning models built for this purpose, our investigation aims to redefine brain tumour detection. Although earlier study has investigated a number of strategies, such as YOLOv8 and convolutional neural networks (CNNs) (BYTE TRACKER, VGG-16, and VGG-19), the current gap is due to the absence of complete solutions that combine CNN-based classification models with pixel-level tumour identification. In order to bridge this knowledge gap, our investigation employs cutting-edge deep learning algorithms to reliably identify malignancies, classify tumour locations, and differentiate between meningiomas, gliomas, and osteomas. CNNs are the computational core of our approach that interpret data from pre-trained models, look for abnormalities in brain imaging, and distinguish between signs of brain cancer and normal brain functions. Our method's evaluation metrics involve the use of area under the curve (AUC), and accuracy.

Keywords: brain tumors, Convolutional neural networks, classification, image segmentation, YOLOv8

Second Plenary / 335

Overview of Intrusion Detection Methods for Internet of Things

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ABSTRACT:

The Internet of Things technology (IoT) has contributed immensely in revolutionizing our daily activities and the increasing number of IoT devices interconnected make it adoption seamless. However, such interconnections also lead to frequent security breaches. Determining intrusions in the IoT environment is one step to creating a strong security posture and preserving the confidentiality,

integrity and availability of the services. This study presents a systematic literature review on intrusion detection methods for IoT networks which are mentioned below. The study investigates signature-based detection herein entails the comparison of network which has patterns close to attacks; anomaly based and behavior-based detection is therefore focused on deviations from the normal activities; hence a machine learning algorithm is set to detect the suspicious activities. NIDS and HIDS enable perceiving network traffic and device operations and employ rules, heuristics, and analytics in order to trace attacks and reveal intrusions. The combined approaches of genres are especially successful in detecting fraudulence, because AI and machine learning models can easily pick up on complex patterns in massive data sets that indicate fraud. Cloud based IaaS has an ally in the scalability of using a cloud platform for real time detection and response to any new security issue. When it comes to effective infiltration detection in IoT systems, technical awareness is the key as you keep yourself abreast with the current threats and carry out periodic upgrade to combat modern security threats.

Keywords: Internet of Things (IoT), machine learning, artificial intelligence, anomaly based, signature based & behavior-based

Second Plenary / **360**

Enhancing Accuracy in Fake News Detection through Advanced Natural Language Processing Techniques

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ABSTRACT

The advent of machine learning algorithms has put a treat in fake news in 21st century. Today, technology has proved that any information that are put on internet will be scrutinise in other to ascertain the authenticity of the information. These fake news can be a derogatory messages against country, organisation, individual, society, and political parties because its fake news and it can be in any form. Today, there are many social media, platforms that many users can post uncensored messages without authenticity and as a results any user can make a post or spread the news through these online platforms. These platforms do not embed any of the machine learning classifiers to verify their posts as a result this research will use machine learning classifiers that can detect these fake news automatically and the use of machine learning classifiers for detecting the fake news is described in the literature review.

Keywords: Text Classification, Online fake news, social media, Machine learning classifiers, fake news, Users, database, model.

Second Plenary / **381**

Sustainable Development Goals and the Pivotal Roles of Nigerian Universities

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Abstract

The Sustainable development goals (SDGs) are collection of seventeen (17) strategically structured goals with specific metrics targeted at improving the world. Actualization of the SDGs is expected to improve the global environment, political and economic needs. Global goals ranging from no poverty; zero hunger; good health; quality education; clean water and sanitation; affordable energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice and strong institutions and partnership for the goals are SDGs instituted to cushion the challenges facing the world. The University is the zenith of the educational platform whose activities are embedded in the three tripodal mandate of teaching, research and community impact. The SGDs provides a platform for the University in giving back to their immediate community by intentional activities and action. This paper entails the 17 SDGs, their performance indicators, the roles of the universities in educational research and innovation and the barriers to SDGs implementations. It also covers the roles of Times Higher Education (THE) in the impact ranking of the global universities via their engagement of the sustainable development goals. This study therefore explores the feasibility of the University mandates via engaging the global goals as well as the barriers of implementation of SDGs. The paper concludes by signposting the synergic roles of the University tripodal mandates as crucial to the feasibility of the sustainable development goals.

Keywords: SDGs; Performance Indicators; THE; Quality Education; Tripodal mandate

Second Plenary / 196

Impact Of Bioentrepreneurship on Acquisitions of Skills among Biology Education Students in University of Ilorin

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Abstract

The impact of skills acquisition in biology requires urgent attention in research. This study examined the perceived impact of bio entrepreneurship on the acquisition of skills among preservice biology teachers at the University of Ilorin. The intervening factors were gender, academic levels and age. This study was a descriptive research type. The population for this study comprised all Biology education undergraduates of University of Ilorin, Nigeria. One hundred and fifty were sampled using a stratified proportional random sampling technique, which was randomly applied across academic levels within the Department of Science Education, Faculty of Education, University of Ilorin. A researcher's designed questionnaire structured in a four-response-type with a reliability coefficient of 0.76 was used for data collection. The data were analysed using descriptive statistics of mean to answer the research questions while research hypotheses were tested using inferential statistics of independent t-tests and Analysis of Variance (ANOVA) at 0.05 alpha level. Findings revealed that preservice Biology teachers held positive perception on the impacts of bio entrepreneurship skill acquisition in providing employment opportunity, self-independent and practical application of biological knowledge to complement career. No statistically significant difference existed based on gender, academic levels and ages. It was recommended that there should be a distilled university syllabi

to include newest technologies and business practice to enable students grasp bio-entrepreneurship principles and enhance functional knowledge.

Keywords: bio entrepreneurship, skill acquisition and job creation.

Second Plenary / **202**

Facial Expression Monitoring In Classrooms Using Cnn And Svm: A Systematic Review

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Abstract:

This study investigates the transformative potential of Support Vector Machines (SVM) and Convolutional Neural Networks (CNN) in monitoring facial expressions within classroom settings. Employing a data-driven methodology, the research aims to revolutionize traditional educational approaches, enabling a deeper understanding of student engagement. Building on the success of these models in diverse domains, the study underscores the pressing need for accurate and timely insights into students' emotional states. It critically evaluates previous research utilizing various machine learning models for facial expression analysis, comparing their accuracy, precision, and recall while delineating their distinct advantages and limitations. Furthermore, the review addresses the inherent challenges in applying machine learning to facial expression analysis and proposes potential solutions to overcome these obstacles. Highlighting the ongoing significance of research in this domain, the article underscores the pivotal role of Convolutional Neural Networks and Support Vector Machines in refining educational practices. By shedding light on the complexities of facial expression analysis and suggesting avenues for improvement, this endeavour contributes to the evolving landscape of educational technology.

Keywords:Face, CNN, SVM, Health, Artificial Intelligence, Machine Learning, Classroom

Second Plenary / **296**

Budgetary Misalignment And Nigeria Economic Growth: The Role Of Artificial Intelligence

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ABSTRACT:

Nigeria's economic growth has been hindered by persistent budgetary misalignment, where government spending priorities often deviate from the needs of the economy, leading to inefficiencies and stagnation. Despite the government's efforts to allocate funds, budgetary misalignment persists due

to factors such as corruption, lack of data-driven decision-making, and inadequate resource allocation mechanisms. This misalignment has resulted in a suboptimal utilization of resources, hindered development in critical sectors, exacerbated socio-economic inequalities, and undermined investor confidence. Leveraging Artificial Intelligence (AI) technologies presents a promising solution to address budgetary misalignment. By employing AI-driven analytics, predictive modeling, and optimization algorithms, policymakers can make data-driven decisions to ensure optimal resource allocation aligned with the country's economic growth objectives. Implementation of the proposed solution entails several steps. Firstly, comprehensive data collection and analysis to understand past spending patterns and identify areas of inefficiency. Secondly, development and deployment of AI algorithms to forecast economic trends, prioritize spending, and optimize budget allocations. Finally, fostering a culture of transparency and accountability to ensure the effective implementation of AI-driven solutions within the budgetary process. Embracing artificial intelligence in the budgetary process holds immense potential to mitigate the challenges of budgetary misalignment in Nigeria. By harnessing the power of AI-driven insights, policymakers can foster sustainable economic growth, enhance resource allocation efficiency, and ultimately improve the well-being of the Nigerian population.

Second Plenary / 305

Neuroprotective Effects Of Nigella Sativa Oil On Litters Of Wistar Rats In Aluminium-Induced Neurotoxicity

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ABSTRACT:

Nigella sativa oil (NSO) has been reported to have anti-inflammatory and antioxidant properties but the protective mechanism of NSO in murine litters exposed to Al in-utero is not yet thoroughly explored. Hence, this study aims to investigate the effects of NSO on Prefrontal cortex (PFC) structure and functions of litters exposed to Aluminium (Al) toxicity prenatally.

Forty (40) female rats weighing between 220-250g were used for this study. Mating was confirmed by vaginal smear and female rats were divided into five groups: Control (normal saline); NSO (2ml/kg/bw); AlCl3 (100mg/kg/bw); AlCl3 (100mg/kg/bw) + NSO (2ml/kg/bw) simultaneously and NSO (2ml/kg/bw (two weeks before gestation) + AlCl3 (100mg/kg/bw). Litters were sacrificed via cervical dislocation after neurodevelopmental behavioural test on postnatal days 1 and 30. Target organ was excised and processed for histological and biochemical analysis.

Neurobehavioral study revealed AlCl3 induced impairment of litters working memory, stained sections of the prefrontal cortex showed cellular distortions and lightly stained nuclei, and induction of oxidative stress all of which were considerably mitigated by NSO.

NSO treatment protected PFC against Al-induced neurotoxicity by improving markers of morphological development, working memory, cellular structure and antioxidant capacity in the PFC. Thus, it is recommended that expectant mothers should avoid Al exposure as it is evident that Al can affect the developing fetus in-utero raising the concerns of exposure during a critical period of brain development.

Keywords: Aluminum, Prenatal, Nigella sativa oil, neurotoxicity, oxidative stress

Second Plenary / 399

Reducing Paperwork and Improving Decision-Making: AI's Role in Nigerian Universities' Policy Implementation

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Abstract

This paper explores the potential of artificial intelligence (AI) in streamlining administrative processes in Nigerian universities. With increasing challenges related to excessive paperwork and complex administrative procedures, universities face inefficiencies that hinder effective decision-making and policy implementation. AI technologies offer innovative solutions by automating routine tasks, reducing manual data entry, and enhancing data management. By integrating AI systems, universities can improve accuracy, speed up administrative tasks, and facilitate more informed decision-making. This leads to a more efficient allocation of resources and enhanced academic and administrative performance. The study highlights specific AI applications, such as natural language processing and machine learning that can transform administrative functions. Additionally, it discusses the potential challenges of adopting AI, including the need for infrastructure development and training. Overall, the paper underscores the significant role AI can play in reducing administrative burdens and fostering a more responsive and adaptive educational environment in Nigerian universities. Through these advancements, institutions can focus more on their core mission of providing quality education and less on bureaucratic obstacles.

Keywords: Artificial Intelligence; Administrative Efficiency; Nigerian Universities; Data Management; Decision-Making

Second Plenary / **329**

Implimentation of Water Trading Business in Oyo State (Water-Mi)

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Abstract:

Water scarcity poses significant challenges to sustainable development in Nigeria, with only 71% of the population having access to safe drinking water. In rural areas, less than 62% of households have access to potable water. Urban water insecurity is a critical challenge in many regions, including Oyo State, Nigeria. With the aim of achieving the United Nations Sustainable Development Goal 6, the initiative seeks to revolutionize water accessibility through innovative solutions. Ibadan, the largest city in West Africa with a population of over 3 million, serves as the prime target market for Water MI due to its significant water supply challenges and potential for growth. This study proposes an innovative solution to enhance water accessibility and delivery through a centralized system

supported by advanced technology. The methodology involves conducting market research, the establishment of a centralized office that oversees the water distribution system, leveraging a user-friendly mobile application to facilitate the ordering of water for various needs, from household use to construction purposes. The app also enables tank drivers to register and participate in the delivery network, ensuring efficient and reliable service. By integrating technology with water logistics, Water MI aims to improve water access, streamline delivery processes, and promote sustainable water management practices in the targeted local governments of Oyo State.

Keywords: Ibadan, mobile application, Water accessibility, Water MI

Second Plenary / 333

Collaborative Partnership to Tackle the Migration Crises of Nigeria

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Abstract:

Migration, an age-old phenomenon, has shaped human history through mass movements. It was driven by factors that ranged from political, economic, spiritual and racial segregation among others. In the spiritual realm Prophet Musa (ASW) led the Israelites from Egypt and Prophet Mohammad (SAW) led Muslims on Hijrah from Makkah to Madinah. In the early to mid-20th century in the United States, millions of African-Americans relocated from the rural South to urban North and Midwest areas. They sought both economic opportunities and an escape from racial segregation and violence. This paper investigated the push factors that instigated the mass movement of skilled and unskilled manpower in Nigeria, a trend that resurged in the mid-1980s. The qualitative method was adopted while the neoclassical, modernization and network-mediated theory were applied because it appropriately captured both the normal and abnormal issues of conflict and maladministration. Findings of this study highlighted how corruption-driven mismanagement, worsened the poverty levels in the nation. It recommends collaborative action among federal and sub-national governments, along with regional bodies like ECOWAS and African Union, as well as international organizations such as IOM, MIDWA, UNESCO, ITU, NAPTIP, and the EU, to address the malady. Additionally, developing nations through a joint approach should advocate for a global economic framework that fosters growth and development to encourage their citizens to remain in the home countries. More importantly good governance must be entrenched to engender economic prosperity for the greatest number of her citizens.

Second Plenary / 349

Preimplantation Genetic Diagnostic (Pgd) as A Tool in Regulation of Birth Defects Among in and Outpatients Attending University of Ilorin Teaching Hospital (Uith)

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ABSTRACT:

Birth defects present significant challenges to healthcare systems worldwide. Preimplantation Genetic Diagnostic (PGD) is a tool in Assisted Reproductive Techniques (ARTs) that is used along In-Vitro fertilization (IVF) to screen embryos so as to prevent birth defects and promote birth of healthy

children. PGD is a complex procedure that include, IVF process, embryo culturing, genetic testing, genetic analysis, selection of healthy embryo and embryo transfer. PGD serves as a ray of hope for couples who are carriers of genetic disorders, have a family history of genetic conditions, or are at risk of passing on chromosomal abnormalities. It allows them to screen embryos before implantation, reducing the likelihood of passing on genetic diseases to their children.
AIM: This study aims to evaluate the role of PGD in regulating birth defects among in and outpatients attending the University of Ilorin Teaching Hospital (UITH).A retrospective analysis will be conducted on medical records of patients who underwent PGD procedures at UITH for a period of 3 months. Data regarding the incidence of birth defects among new-borns conceived with and without PGD will be compared.The outcome of this study will be presented at the upcoming KU8 international conference and published in a reputable journal.

KEYWORDS: Preimplantation Genetic Diagnostics (PGD), In-Vitro fertilization (IVF), Assisted Reproductive Techniques (ART), Birth Defects, University of Ilorin Teaching Hospital (UITH).

Second Plenary / **420**

Optimization of physicochemical parameters for lipase production by a lipolytic bacteria using shea nut cake as a substate

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Abstract
The high cost of enzyme and ethical issues surrounding the use of edible oils has prompted the research into non-food feedstocks for the manufacture of sustainable industrial enzymes. This study investigates the utilization of shea nut cake, a waste from shea butter mill, as a substrate for optimization of lipase by a bacterial isolate from shea butter mill effluent. Bacteria isolated from shea mill effluent were subjected to primary screening on tributyrin agar plates while the most potent isolate was identified using the 16s RNA method. The effect of physicochemical parameters such as agitation rate, pH and inoculum size on lipase production were investigated on shea nut cake using the Central Composite Design (CCD) of Response Surface Methodology (RSM). The result from the primary screening showed that isolate OA had the highest hydrolysis zone of 53 mm. Molecular identification suggest that isolate OA has 99.9 % similarity with Pseudomonas aeruginosa strain MAR with accession number MK572634.1. Optimization of lipase production using the CCD-RSM resulted in an optimal lipase production of 188.5 U/mL at an agitation rate 60 rpm, inoculum size of 5 and pH of 7.5. The close proximity of the predicted lipase (179.2 U/mL) and a high correlation coefficient (R2 =0.9360 and p >0.05) suggest the validity of the model. This study established the use of shea nut cake as an alternative low cost substrate for lipase production and suggest an appropriate choice for industrial processing conditions for lipase production by Pseudomonas aeruginosa MAR.

Keywords: Response surface methodology, Lipase, Pseudomonas aeruginosa, Shea butter mill effluent.

Second Plenary / **421**

Perspective of Secondary School Students on Causes of Mental Health Issues and Substance Misused in Nigeria

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Abstract

This qualitative study explores the perspectives of secondary school students on the causes of mental health issues and substance misuse in Nigeria, involving 12 respondents through semi-structured interviews. The study examines students' understanding of factors contributing to these challenges, including societal, familial, and personal influences. Findings reveal that students perceive peer pressure, academic stress, family dynamics, and societal expectations as significant contributors to both mental health issues and substance misuse. Additionally, exposure to media and insufficient mental health education may exacerbate these problems. Recommendations based on these findings include implementing comprehensive mental health and substance misuse education in schools to raise awareness and equip students with coping strategies. Schools should foster supportive environments that encourage open dialogue about mental health and substance misuse, reducing associated stigma. Collaboration with mental health professionals to provide accessible resources and counseling services in schools can also offer students the support they need. This study emphasizes the importance of targeted interventions and preventive measures to address the root causes of mental health issues and substance misuse among secondary school students in Nigeria.

Keywords: Adolescents; Mental health issues; Substance misuse; mental health education; preventive measures

Second Plenary / 441

Personal Income Tax and Domestic Debt Servicing : Verdict from Panel Fixed Effect

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ABSTRACT

This study absolutely examined the effect of PIT on domestic debt servicing in South western states, Nigeria. Data used to gauge the impact of PIT on domestic debt servicing were assembled from each state internal board of Revenue, CBN and FBS from 2011 to 2023. Data gathered from all south western states were analyzed with Pearson correlation, VIF, and panel data analytical tools such as pooled regression, fixed effects and random effects estimations. Hausman was further ignited to select better model amid fixed effects and random effects estimations. Other tests such as autocorrelation test, VIF, and heteroskedasticity were also conducted. It was divulged from the study that PAYE was discovered having positive effect on domestic debts servicing. Direct assessment and road tax also possessed cordial relationship with domestic debt servicing but other taxes and MDSAREV impacted domestic debt servicing negatively. Conclusively, positive correlation established between personal income tax revenue and domestic debt servicing in South-Western Nigeria. Also, PIT has positive, significant and statistical impact on domestic debt servicing in South-Western Nigeria. When personal income tax collections increase, the government tends to rely less on domestic debt to finance its activities. It is recommended that government should strengthen tax enforcement mechanisms to display proper accountability and transparency measures so that revenue realized from PIT will be enormously enough to emaciate domestic debt significantly in south western Nigeria. Government

should also lessen domestic borrowings but activate unexploited taxes embedded in PIT, and curtail corruption in borrowed funds for effective usage in the country.

Key Words: Domestic Debt Servicing; PIT; PAYE, Road Tax; Direct assessment.

286

Innovative Curriculum in Haematology and Blood Transfusion Science: A Sustainable Choice for Medical Laboratory Science Undergraduates.

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Abstract

The Medical Laboratory Science (MLS) profession is experiencing a surge in popularity among undergraduates. However, the current curriculum may not be meeting the evolving demands of this field. This study aims to examine the need for an innovative curriculum in Haematology and Blood Transfusion Science (HBTS) to sustain the interest of MLS undergraduates. This study is a cross-sectional survey conducted among MLS undergraduates at Al-Hikmah University, Ilorin, Nigeria. A questionnaire designed by the authors was administered to third-year to fifth-year students, exploring their needs for mentorship, research exposure, professional development, and collaboration. The survey found that most students (86%) value mentorship and (46%) research exposure in HBTS. While most students (66%) are interested in continuous professional development (CPD) programmes, only a quarter (26%) proficiently use Laboratory Information Management System (LMIS). Moreover, most (60%) support continuous professional development, and about half (56%) believe in collaboration with peers at other universities. However, only a third (30%) agree on a two-way feedback mechanism between students and lecturers. Meanwhile, majority (92%) consider HBTS a mandatory part of their curriculum. This study concludes that there is a need for more innovations in training and information management in the curriculum to sustain the interest. We recommend that training institutions and the Medical Laboratory Science Council of Nigeria (MLSCN) enhance the curriculum with periodic Continuous Professional Development programmes, LMIS courses, integrated mentorship and collaboration seminars, and increased clinical exposure. By implementing these, the students can be better prepared to address the evolving demands of the Profession.

Keywords:
Blood Transfusion Science; Curriculum; Haematology; Innovation; Medical Laboratory Science

231

Efficacy of Conflict Resolution Practices among Goat Keepers and their Neighbours: Lessons from Kwara State, Nigeria

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Abstract

This study assessed the efficacy of conflict resolution practices among goat keepers and their neighbours. A four-stage sampling technique was used in selecting two hundred and forty respondents for the study. Data were obtained using well-structured questionnaire. Frequencies, percentages, means and regression were used to analyse the data.
The demographic study of the respondents shows that their mean age was 47.8 years, and they were predominantly females (56.3%) with an average of 17 years of residence in the communities. Indiscriminate goat excreta and goat feeding on foodstuff kept outside for preservation purpose by neighbours were identified as the major cause of conflict in the study area ($\bar{x}$=3.85 and 3.79 respectively). Tying down goats was identified as the most effective resolution strategy in the study area ($\bar{x}$=2.10). The regression analysis reveals that ageand years of residencehave significant influence on the perceived effectiveness of the conflict resolution strategies at 0.05 level of significance.
The study concluded that for goat keepers to sustain goat keeping activities within the neighbourhood, fencing and/or tying down the goats is crucial. It was recommended that goat keepers should learn more about waste management and disposal to keep a clean and healthy environment.

Keywords: Conflict, Goat Keepers, Neighbours, Food Security, Environment

324

Impact of Institutions on Government Revenue in Sub-Saharan African: Evidence from Explainable Artificial Intelligence Models

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Abstract
Revenue generation has continued to be a major concern for Sub-Saharan African countries as they have to rely on debt to finance their budgets. The countries have consistently failed to meet its yearly revenue target. Hence, empirically investigating the determinants of government revenue in SSA region has continue to attract attention in policy and academic debate.
Previous efforts from both theoretical and empirical literature have produced a number of factors which determine revenue generation from various sources. However, very limited effort have been made to examined how institutional factors like government effectiveness, control of corruption, regulatory quality, voice and accountability and political stability and absence of violence can predict government revenue in SSA countries. While very few studies examined how government revenue is affected by institution (Abrams et.al. 2022), it was based on correlation model.
With the emergence of AI based model due to the revolution in technology, it is possible to investigate the relationship between dependent and independent variables without assuming linearity. The novelty of this study is thus the application of explainable artificial intelligence, which is an AI based model to examine the predicting value of governance institutions on government revenue in SSA countries.
From the foregoing therefore, this study aims at examining the impact of governance institutions on government revenue (tax and non-tax revenue) using explainable artificial intelligence model. The study would use secondary data for 50 Sub-Saharan African countries covering 1996 to 2022.

246

THE LEGAL REQUIREMENTS FOR ENTREPRENEURIAL PRACTICE IN NIGERIA AS UNPLEASANT NECESSITIES

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Abstract

Entrepreneurship as an antidote to unemployment globally. It has been discovered that the observed situation of unemployment is more serious than what official statistics want us to believe in Nigeria. The rate posted by the CBN is doubtful, the unemployment rate in Nigeria has reached an unacceptable level leading to all sorts of vices like fraud, corruption, banditry, militancy, boko haram, herdsmen violence, money laundering and cybercrime. To put these problems at bay, entrepreneurship is very essential. However, in spite of the relevance of the entrepreneurship in solving unemployment problem in Nigeria, this paper seeks to discuss the legal hurdles any willing entrepreneur in Nigeria will cross before he can establish a successful business that will employ the teeming youths. This paper will use doctrinal method, we shall look at the various laws, rules and regulations governing formation of business organizations in Nigeria, the law of intellectual property as it relates to entrepreneurship, the law of taxation and tax reliefs available to an entrepreneur, standardization of products, business finance through raising of capital and issue of collateral security and guarantorship and insurance of business premises. This paper will conclude by recommending alternative method of dispute resolution so as to reduce cost, time and preserve business relationship.

194

Effects of Combination of Acesulfame Potassium and Aspartame on Oxidative Stress Markers in Brain of Rats

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Abstract

This study investigated the effects of combination of acesulfame potassium and aspartame on oxidative stress markers in brain of female rats. Forty rats were randomly assigned into five groups A-E. Group A serve as the control group and were given distilled water group B were given 0.5 mL of combined acesulfame potassium and aspartame, group C were given 0.5 mL of 15 mg/kg/b.w of acesulfame potassium, group D were given 0.5 mL of 50mg/kg/b.w aspartame and group E were given 0.5 mL of 330mg/kg/b.w sucrose. There was no significant difference ($P<0.05$) in the activities of superoxide dismutase, catalase, glutathione level and malondialdehyde level in the brain of rats exposed to combined acesulfame potassium and aspartame. This study indicate that at the tolerable daily intake value WHO, (15mg/kg/b.w acesulfame potassium and 50mg/kg/b.w aspartame) combination of acesulfame potassium and aspartame does not constitute oxidative stress in brain of female rats.

135

Exploring the Staff's Perspective on the Impact of Artificial Intelligence (Ai) in Delivering Health Services in Al-Hikmah University, Kwara State, Nigeria

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Abstract

Over the years, artificial intelligence has transformed the healthcare industry, offering innovative solutions to improve service delivery and patient outcomes. This study explores the opinions of Al-Hikmah University staff regarding the impact of AI on delivering health services. A qualitative research approach was employed, utilizing the survey method with a sample of staff members involved in healthcare delivery. This study found that participants acknowledged the potential of AI to enhance diagnostic accuracy, streamline administrative processes, and improve patient care. Moreover, concerns were raised as regards job loss and the need for upskilling to adapt to AI integration. Ethical considerations such as patient privacy and data security were also highlighted as important factors in AI implementation. Ultimately, the findings of this study suggest that while AI offers promising opportunities for enhancing healthcare delivery, its successful integration requires careful consideration of ethical, organizational, and workforce implications.

Keywords: Artificial Intelligence, Machine Learning, Deep Learning, Predictive Analytics, Prescriptive Analytics, Drug Discovery, Medical Imaging, Clinical Decision Support, and Personalized Medicine.

406

WOMEN IN THE INFORMAL ECONOMY: A HISTORY OF CHEWING STICKS TRADE IN ILORIN UPTO THE 21st CENTURY

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Abstract

This paper examines the history of women's involvement in the informal economy with particular reference to trade in chewing stick in Ilorin upto the contemporary time. Informal economy captured economic activities of women in the throes of poverty and underemployment which characterized the economic marginalization of women in a developing Africa economy. The nature of the informal economy as first hand means of livelihood and survival attracted women, as much of them are dominated by women upto the contemporary time. This paper, using primary and secondary sources of history, therefore, seeks to establish the relevance of chewing stick trade in the contemporary period when there are industrial toothpastes and how women lives are sustained through the trade in Ilorin. The paper concludes that trade in chewing stick has been a source of livelihood, and financial strength of women traders, given the significance of the different types of chewing sticks to human existence.

Keywords: informal, economy, women, trade and empowerment

195

Crop Calendar Design for Rainfall Prediction using Artificial Neural Network in Nigeria

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This study focuses on the design of a crop calendar, which plays a crucial role in agricultural planning and management. In regions like Nigeria where rainfall patterns significantly impact agricultural activities, accurate prediction of rainfall becomes essential for crop planning. In this study, we propose the use of artificial neural network (ANN) models to predict rainfall patterns in Nigeria. By leveraging historical weather data and employing ANN techniques, we aim to develop a crop calendar design that assists farmers in making informed decisions regarding crop selection, planting, and harvesting. Our methodology involves comprehensive data collection, model development, evaluation, and visualization techniques applied in constructing a crop calendar design for rainfall prediction, distinguishing between raining and non-raining conditions, utilizing Artificial Neural Networks (ANN). This initiative is titled the 'AI for Rain Prediction Tool' (AI4RPT). Upon completing our thorough evaluation of the tool, the designed pipeline and implementation will be made accessible for public use via our GitHub repository. Presently, we have generated promising results from AI4RPT using publicly available data, demonstrating high prediction accuracy and minimal misclassification errors.

Key words: rainfall prediction, ANN, AI4RPT, prediction accuracy.

303

Maximizing Research Visibility Through Open Access Publishing

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Abstract:

One of the major yardsticks for career advancement of academic staff in universities is research productivity. Amidst other factors, visibility of such research outputs equally adds to the credibility of the institutions. Research outputs in some Nigeria universities have not gotten that visibility compared to other parts of the world. Reason for this include but not limited to adoption of traditional closed publication that requires intended beneficiaries or users to pay to access content through a one-time fee or subscription. Efforts have been made to increase these visibilities through Institutional Repositories (IRs) and Open Access Publishing. The open access initiatives have transformed

knowledge dissemination and accessibility of scholarly work across various disciplines. However, there are still challenges with publishing research output utilizing the open access route. There is need to understand researchers perception to further promote the acceptance of open access. Thus, this study through a descriptive survey investigates the awareness and adoption of open access publishing among researchers in universities in Kwara State. Explore factors that influence their knowledge and their perceptions on open access routes, challenges associated with open access publishing and extent of adoption of open access practices in their scholarly activities as well as institutional factors shaping their adoption of open access. By identifying barriers to open access publishing, the study aims to provide valuable insight to academics, university research output visibility, funding agencies and publishers aiming to promote open access initiatives and fostering a more inclusive scholarly landscape.

Keywords: Adoption, Awareness, Open access, Publishing, Research visibility

443

The Nexus between Financial Strain and Domestic Violence among Educators

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Abstract
This study investigates the link between financial strain and domestic violence among primary school teachers in Kwara State, Nigeria. Using a descriptive ex-post-facto design and multistage sampling, data was collected from a population of 300 teachers. financial strain and domestic violence were measured using scales developed by Orshansky (1963) and Abolmaali et al. (2014), respectively. Analysis revealed a significant correlation ($r = .713$, $P < 0.05$) between financial strain and domestic violence, rejecting the null hypothesis. The findings underscore the need for targeted economic empowerment initiatives for teachers in Kwara State to address financial strain as a contributor to domestic violence. Recommendations include enhancing financial literacy, providing vocational training, and creating additional income opportunities through collaboration between government and non-governmental organizations.
Keywords: domestic violence, educators, financial strain, financial strain,

167

Interfaith Dialogue in Nigeria: A Panacea for Development

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It has been argued that interfaith dialogue could be critical for achieving sustainable development. However, there are limited studies on the relationship between interfaith dialogue and development in Nigeria. It is against this backdrop that this chapter explores the relationship between interfaith dialogue and development. The convergence of faith among Islam, Christianity, and Traditionalism is examined through shared beliefs, themes, characters, and teachings found in their holy scriptures. The chapter uses secondary data as both relevant grey and academic literatures were used to achieve

the aim of the study. The analysis revealed that despite differences in major religious in Nigeria, the shared belief in one God, the importance of prophets, moral codes, and the afterlife serve as common ground for mutual dialogue and understanding. Principles such as mutual respect, understanding, empathy, education, and communication are identified as foundational for successful interfaith dialogue. While challenges such as stereotypes and misconceptions exist, approaching dialogue with humility, curiosity, and respect can pave the way forward. The benefits of interfaith dialogue include mutual learning, increased social cohesion, and collaboration towards addressing common concerns. Despite the challenges, concerted efforts at individual and organizational levels can lead to deeper understanding, finding common ground, and building bridges for a more peaceful and just society.
Keywords: Interfaith; Religious; Dialogue; Understanding

445

METAVERSE IN THE PLAY: A STRATEGY FOR EARLY CHILDHOOD EDUCATORS

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Abstract
This paper explores the potential of Metaverse technology as an innovative platform for early childhood educators. The Metaverse, a collective virtual shared space created by the convergence of virtually enhanced physical reality and physically persistent virtual space, offers immersive, interactive environments that can transform early childhood education. This paper suggests how Metaverse platforms can enhance learning experiences, support diverse learning styles, and facilitate creative and collaborative teaching methods. By leveraging the immersive nature of the Metaverse, educators can create engaging, playful, and educational experiences that promote cognitive and social development in young children. The paper suggests that the Metaverse can provide unique opportunities for personalised learning, increased engagement, and innovative pedagogical practices, thereby addressing some of the current challenges in early childhood education. The paper concludes with recommendations for the implementation of Metaverse-based tools and the need for further research to optimize these technologies for educational use.

Keywords: Early childhood Educators, Early childhood environment, Metaverse

268

DIGITAL HEALTHCARE TRANSFORMATION USING TRIPPLE HELIX MODEL: A REVIEW

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Abstract
Nigeria's development in digital healthcare is hampered by weak collaboration environments, underscoring the necessity of removing barriers to successful adoption. This review explores how collaborative effort can improve the transformative impact of digital healthcare tools in Nigeria's healthcare system. To create novel solutions and convert research into useful applications, there is a need for the adoption of the Tripple Helix model. The reviewed literature highlighted the critical importance of the adoption of the Tripple Helix model. The adoption of the model is expected to stimulate innovation and turn research into practical solutions. Recommendations to improve healthcare outcomes through early disease diagnosis include industry-university alliances, and government funding to close the research-application gap.

Keywords: Collaborative efforts, Disease detection, Digital health, Industry-university partnerships

446

Evaluation of Undergraduates'Use of ICT Tools for Academic Activities and Perceived Learning Outcomes in Kwara State

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ABSTRACT
This study evaluates the use of Information and Communication Technology (ICT) tools by undergraduates for academic activities and their perceived learning outcomes in Kwara State, using the Kirkpatrick Evaluation Model. The research employs a quantitative survey to gather data from a sample of undergraduate students across multiple universities in Kwara State. The Kirkpatrick Model's four levels; Reaction, Learning, Behavior, and Results serve as the framework for assessing the effectiveness of ICT tools in enhancing academic performance and learning experiences.
The findings from the study indicate that students generally have a positive reaction to the availability and usability of ICT tools, with a significant proportion expressing satisfaction with the ease of access and the enhancement of their learning experiences. In terms of learning, there is evidence of improved understanding and retention of course material, as students report better engagement and comprehension when using ICT tools. Behaviorally, the study observes an increase in the practical application of knowledge and improved academic behaviors, such as increased research and collaboration among students. Finally, the results suggest a positive impact on academic performance, with students perceiving higher grades and better preparedness for professional endeavors. The study concludes that ICT tools play a crucial role in modernizing education and improving learning outcomes in Kwara State. Recommendations for policy makers and educational institutions include increased investment in ICT infrastructure, ongoing training for both students and faculty, and the integration of ICT tools into the curriculum to maximize their potential benefits.

369

Soldiers and Civilians: Bridging the Gap for Sustainable Peace in Nigeria

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Abstract
In Nigeria, the relationship between soldiers and civilians is pivotal in the quest for sustainable peace amidst persistent conflict. The military is an important organization of the modern state. Its contribution to nation-building cannot be overstated or waved aside. Despite the essential role of the armed forces, their relationships with civilians have been a significant area of concern. This paper explores the critical need for bridging the gap between soldiers and civilians to achieve sustainable peace in Nigeria. By examining the historical context and current dynamics of civil-military relations, the study highlights the importance of mutual understanding, respect, and collaboration between these groups. Drawing on theoretical frameworks such as the Contact Hypothesis and Social Identity Theory, it seeks to provide insights into strategies for bridging divides and promoting sustainable peace within communities of diverse ethnic backgrounds. Furthermore, the paper underscores the urgency of fostering cohesive relationships between soldiers and civilians as a fundamental component of long-term peacebuilding efforts, emphasizing the significance of joint initiatives and cooperation in addressing the root causes of conflict and building resilient communities.
Keywords: Soldiers, Civilians, Bridging, Sustainable, Peace,

278

Development of Artificial Intelligence(AI)-Based Learning Management System: A Concept

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Abstract:

Artificial Intelligence (AI) integration in education has transformed various sectors in the 21st century. Traditional Learning Management Systems (LMS) and online platforms often lack personalization. AI-based LMS offer tailored feedback and adaptivity, enhancing learning. This gap can be effectively addressed by transitioning to AI-based LMS that utilize advanced learning algorithms and recommendation systems. These system will analyze learner data, such as preferences and performance, to offer tailored feedback and adaptive learning experiences.
This study aims to enhance learning experiences and improve assessment methods by developing an AI-based recommendation system within an LMS. Leveraging advanced AI technologies, including recommendation algorithms and adaptive learning techniques, the proposed system will provide personalized feedback and dynamically adjusts task difficulty based on learners' progress, and real-time assessment.
Additionally, automated grading for essay-based assessments will be facilitated, streamlining the evaluation process for educators.
Thus, AI integration in education will revolutionizes learning experiences and address traditional LMS's limitations. By harnessing AI technologies, educators can provide more personalized and transformative learning experiences.

Keywords: Adaptive Learning, Artificial Intelligence, Learning Management System, Personalized Learning, Recommendation System.

213

Assessment of the Microbial Diversity of Fermented Beverage Made from Sprouted Acha Grains

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Abstract

Digitaria exilis also known as fonio or acha, is a naturally gluten-free African cereal rich in nutrients, including protein, fiber, iron, B vitamins, and magnesium. Fermented beverages which are part of traditional food cultures worldwide can be made from acha. Such beverages are known to have health benefits but there is a dearth of information on the microbial groups involved those produced from acha grains. Acha grains were germinated and fermented to produce a beverage and the physicochemical and microbiological properties during production and of the product were assessed. From washing stage through soaking, germination and fermentation, the pH increased
while the titratable acidity (TTA) decreased. The microbial counts of the lactic acid bacteria (LAB) increased from 0 CFU/mL (at washing) to 10.51 CFU/mL (during fermentation). The probable identities of the LAB isolates were Lactobacillus centosus, Lactobacillus rhamnosus, Lactobacillus paracasei and Lactobacillus plantarum. This study provides an opportunity to bridge the gap between traditional and modern knowledge.

Keywords: Gluten-free, Digitaria exilis, Fermented beverages, Fermentation, Lactic acid bacteria

293

Translation and Entrepreneurship: The Vital Role of Translators in Sustainable Global Business Development

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Translation plays a crucial role in facilitating global business development and promoting sustainable entrepreneurship. This paper explores the vital role of translators in bridging language barriers among stakeholders and facilitating communication in the context of entrepreneurship. Through a comprehensive review of literature and case studies, this paper highlights the significant impact that language translation has on sustainable global business practices. As cultural mediators helping to navigate diverse cultural and linguistic landscapes, translator's roles in entrepreneurial development cannot be overemphasized. By accurately translating business documents, marketing materials, and communication channels, translators enable entrepreneurs to reach new markets and establish meaningful connections with stakeholders globally. They play a critical role in ensuring that business practices adhere to local customs, laws, and regulations; thus contributing to sustainable and ethical business practices. Importantly, translators contribute to the development of innovative business strategies by providing valuable insights into local market trends and consumer preferences. Through their linguistic and cultural expertise, translators help entrepreneurs tailor their products and services to meet the specific needs of diverse markets, ultimately enhancing the sustainability and success of their ventures. In conclusion, this paper argues that translators are indispensable partners in sustainable global business development. Their ability to facilitate cross-cultural communication, ensure compliance with local regulations, and provide strategic insights makes them valuable assets to entrepreneurs seeking to build successful and responsible businesses in today's interconnected world.

363

Two Decades after the Abuja Declaration: An Assessment of the Nigeria Healthcare System, 2001-2023

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Abstract:
In April 2001, African Union leaders pledged to allocate at least 15% of their national budgets to healthcare. However, Nigeria has yet to meet this target, consistently allocating only about 5%. The World Health Organisation recently ranked Nigeria 187th out of 191 countries in its global health system evaluation, highlights the severe issues in Nigerian healthcare governance such as inadequate infrastructure, shortage of staff among others. This study examines the evolution and current state of Nigeria's healthcare sector since the Abuja Declaration, employs qualitative methodology, using secondary data such as journals, textbooks and newspapers. The findings of the study reveal chronic underfunding has led to inadequate infrastructure, severe personnel shortages, and a fragmented system plagued by inefficiencies. Urban hospitals are overcrowded and understaffed, while rural areas face even greater resource and access deficiencies. The public sector provides substandard services, in stark contrast to expensive private care inaccessible to most Nigerians. In addition, a significant brain drain of healthcare professionals seeking better opportunities abroad exacerbates the staffing crisis. These systemic issues have hindered Nigeria's progress towards achieving Universal Health Coverage and improving health outcomes, leading many Nigerians to seek alternative treatments or medical tourism. The study underscores the urgent need for Nigeria to fulfil its Abuja Declaration commitment, prioritise healthcare funding and implement robust reforms to enhance the quality, accessibility and efficiency of the Nigeria healthcare system.

Keywords: Abuja Declaration, Brain-drain, Budgetary Allocation, Healthcare, Nigeria

283

Insecurity and its implications on Food Security: A Reflection on the Roles of the Nigerian State

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Abstract
The major threat to the realization of poverty eradication and food security through adequate domestic food production in Nigeria today is insecurity. Farmers/herdsmen conflict and operation of the bandits in the rural communities have negatively affected the livelihood of millions of rural dwellers whose activities is to cater for immediate family needs. It is on this note that the paper reflects on the efforts of Nigerian State to manage the insecurity problem for sustainable food production and reducing hunger and poverty. To achieve the paper objective the secondary source of data was adopted. By examining and analyzing the data, the study contends that the Nigeria state is not well coordinated in their approaches to curtail security problems instigated by bandits and farmers-herders violence. The criminals took advantage of uncoordinated response of the government to establish themselves and constitute security threats to rural communities across the country. The rural dwellers that are used to the system of producing food for family survival year-in-year-out were either kidnapped or displaced or killed by non state actors. This invariably reduced food production and increase level of poverty and hunger. The paper thus, concludes that if the current security situation is not properly addressed, it will hinder the chance of achieving SDGs, most especially hunger and poverty in

Nigeria. The paper recommends among others that the government should be consistent in their approach to security problems and recognized the right of the victims.

290

Strategies for Improving Technology Transfer and Commercialization Between University and Industries: A Review.

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Abstract :

This review investigates techniques for increasing technology transfer and commercialization of research outputs from universities to industries to promote economic growth and innovation in Nigeria. The paper emphasizes the importance of collaboration between academics and industry in addressing the knowledge gap and driving economic development. Despite the fact that academic institutions in Nigeria produce a substantial amount of research output, the potential for technology transfer and commercialization between universities and companies remains largely unexplored. Encouraging multidisciplinary research and establishing platforms for networking and relationship building are critical steps toward improving these collaborative endeavours. Literatures reviewed discussed the value of experiential learning, the role of Technology Transfer Offices, and the influence of previous experiences on technology transfer outcomes. The findings show that investing in research infrastructure and establishing legislative frameworks that encourage collaborative innovation can help to assist effective technology transfer efforts. Recommendations proposed include networking events which will foster university-industry relationships, multidisciplinary research efforts, and research project incentives. By employing these techniques, stakeholders can strengthen university-industry ties, promote innovation, and achieve long-term economic growth through successful technology transfer and commercialization efforts.

Keywords: Commercialization, Collaboration, Economic growth, Innovation, Technology transfer.

149

Assessment Of Socioeconomic Factors Affecting Food Safety Practices Among Women Cheese Marketers In Kwara State, Nigeria

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Abstract

The study investigated on socioeconomic determinants of food safety practices adopted by cheese marketers in Kwara State, Nigeria. Primary data were collected from 120 cheese marketers who were randomly selected using a three-stage random sampling technique. The data collected were analysed using descriptive statistics and Tobit regression model. The result reveals that the average mean age was 33 years, showing that they are still active and in their productive age. Most respondents were married females with an average family size that helped them with their labour. About 37% cheese sellers considered cheese contamination a major risk to marketing cheese. The adoption of safety practices among sampled cheese marketers was low. The low adoption of safety practices may contribute to the low demand for cheese. The socio-economic factors such as age, perishability risk involved, income, and level of education and social group participation were statistically significant factors that positively influenced the adoption of safety practices among women cheese marketers in the study area. Only migration decision was found to be negatively significant to explain the adoption of safety practices among sampled cheese marketers. Some constraints faced by sampled women cheese marketers might account for the low adoption of food safety practices. Policymakers and cheese value chain actors should be aware of and address these constraints to and socioeconomic factors of adopting food safety practices to promote domestic cheese marketing.

Key Words: food safety practices; women, cheese marketer, socioeconomic factors

130

The Impact of Traditional Institutions Methods of Managing Farmers-Herdsmen Conflict on Food Security in Oyun LGA, Kwara State

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Abstract

Conflict between the herders and farming community has been a recurring decimal in the last two decades, majorly in some part of Africa such as Nigeria. The conflict seems unavoidable and has continue to negatively contribute to food security in the country sideways other factors such as boko-haram insurgency, banditry, kidnapping of farmers, amongst others. However, the conflict is observed to be functional in Oyun LGA of Kwara state with limited attention paid to the impact of traditional institutions methods in ensuring peaceful co-existence of both parties. Thus, this study assessed the impact of traditional institutions methods of managing farmers-herdsmen conflict on food security in Oyun LGA, Kwara state. The study is anchored on human needs theory to explain causes of farmer-herders conflict and Wiredu's moral consensus theory to justify and assess the relevant of traditional conflict resolution methods in resolving the conflict. This study adopted descriptive research design with the use of quantitative and qualitative research methods. 420 respondents were administered copies of questionnaire and 24 interview sessions conducted. The finding showed the major causes of farmer-herder's conflict as: underage herding of animals, destruction of crops and farmland by herders and competition for natural resources. Dialogue, mediation, negotiation and reconciliation was traditional institutions methods adopted. These methods were found to effective in reducing the conflict and enhancing food security. The traditional institutions method of conflict resolution should be constitutionally recognized and traditional leaders empowered to mediate between farmers and herders without any constrain what so ever.

Keywords: Conflict Management, Traditional Institutions Methods, Farmers, Herders, Food Security

183

Climate Change Perceptions and Adaptation Strategies among Grain Crop Farmers in Soba Local Government Area of Kaduna State, Nigeria

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Abstract

The study focused on assessing the perceptions and adaptation strategies to the changing climate as experienced by grain crop farmers in Soba local government area of Kaduna state, Nigeria. This was achieved through a set of objectives which examined the farmers'perception on climate change as well as their adaptation strategies. 375 copies of a questionnaire were used to acquire relevant information from selected respondents. The research used snowball sampling techniques to administer the questionnaires in the study area. The geographical scope of the study was the eleven political wards of Soba. The farmers'perceptions on the occurrence and causes of climate change was analyzed using simple descriptive statistics while their perceived impacts of climate change and adaptation strategies were placed on a five-point likert scale. Based on the results, it was observed that majority of the respondents are aware of climate change as their response status is in line with the scientifically proven facts. The highest ranked impact of climate change as perceived by the people in the study area is "incidences of drought affect grain crops"with a mean score of 3.82. The highest ranked adaptation strategies adopted by the farmers in the study area were application of fertilizer/animal dung on the farms to improve crop yield (3.77) and water harvesting during the rainy season (3.71). The development of climate change policy that will enhance the adaptive capacities of the rural communities with emphasis on poverty reduction is recommended.

Keywords: climate change, perceptions, adaptation strategies.

215

Households Consumers' Preferences for Leafy Vegetables In Kwara State, Nigeria

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ABSTRACT

Most Nigerian households consume below nutritionally recommended quantity of vegetables despite its nutritional importance as a dietary component. The study examined consumers' preferences for leafy vegetables in Kwara State. Specifically, the study examined the purchasing behaviour of vegetable consumers in the study area, and examined the factors influencing the purchasing behaviour of vegetable consumers. A three-stage sampling technique was used to select 120 households with a structured questionnaire. Descriptive statistics, Ordered Probit Regression and Ordinary Least Square Regression Models were used for data analyses. The mean age of the vegetable consumers was found to be 47 years, most respondents (41.7%) purchase vegetables 2-3 times/week and 47.5% of the respondents purchase in an open market. The major constraints to vegetable consumption were seasonal availability, contamination risk and hygiene. At $p<.05$ freshness and availability are the attributes of vegetables that affects vegetable price. In addition, gender and primary occupation determines the purchasing behaviour of the vegetable consumers. The study concluded that the frequency of vegetable purchase is determined by gender, occupation, educational level and freshness, safety, all year-round availability were majorly considered by the vegetable consumers in consuming their preferred vegetable. It is therefore recommended that the government make efforts to increase the salaries of workers and also provide employment to increase their purchasing power. Also, vegetable sellers should ensure vegetables are being sold fresh and also maintain hygiene as these are considered by consumers in purchasing vegetables.

Keywords: Consumer; Vegetables; Nutrition;

269

Valorization of Cow Hooves by Bacterial Isolates for the Production of Hoof Hydrolysates with Growth-Promoting effect on Vegetables

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Abstract:

Every year, millions of tonnes of hoof waste are produced as a byproduct, severely polluting the environment. These wastes are difficult to degrade because they contain insoluble, highly rigid, and recalcitrant keratin polypeptides. Keratin's high mechanical stability and cross-linked disulfide bonds protect it from degradation by common proteases and chemical catalysts.

In this research, hooves were collected from hoof dump site of Atenda (abattoir) Ogbomoso. Coordinates of the locations was taken. The hooves were grounded and sieved to attain the required size. The keratin based medium (minimal medium) was compounded and of Isolation of Keratinolytic bacterial was carried using pour plate method. Plates were incubated at 37oC for up to 72 hrs. Biotransformation of cow hooves was carried out using fermentation medium (a minimum medium devoid of agar and nystatin) for 5-7 days.

Out of the eight bacterial isolates, two were keratinolytic bacterial and designated as KW 22and CF 22. The keratinolytic activities (KA) recorded were in the range of 53-25 U/ml and 52-26 U/ml was produced by isolate KW 22 and CF22 respectively at 168hr of fermentation under the required fermentation conditions. The maximum KA value obtained for isolate KW 22 and CF 22 were 25U/ml and 26U/ml at 120hr of fermentation.

The hoof hydrolysate obtained from Isolate CF 22 enhanced the germination characteristics and seedling growth of Amaranthus caudatus and Zea mays after 7 days of cultivation.

Enzymatic hydrolysis of keratin offers numerous advantages, including higher productivity, lower

energy consumption, reduced waste generation, and improved waste management. The use of keratinases adds value to poultry and industrial wastes, making it both economically feasible and environmentally sustainable.

Keywords: Cow hooves, keratinase, sanitation and, waste degradation

320

Prediction of Capital Structure and Performance of Firms in the Consumer Goods Sector of the Nigerian Exchange Group using Artificial Neural Network

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ABSTRACT:

A well-defined capital structure is crucial for the long-term success of any organization. It ensures financial stability and facilitates sustainable growth. Capital structure refers to the mix of debt and equity financing used by a company to fund its operations and investments. Scholars and financial professionals have been enthralled with the complex relationship that exists between capital structure and firm performance for many years. It is essential to comprehend how consumer goods companies, which are a major driver of the Nigerian economy, use debt and equity financing to maximize their financial health in order to promote sustainable growth and navigate the constantly changing Nigerian Exchange Groups (NXG) market. This research explores this complex relationship by predicting how capital structure decisions will affect the performance of consumer goods companies listed on the NXG. It does this by using the potent tool of artificial neural networks (ANNs). Money structure is thus defined as the process of managing money from various sources to ensure that the organization has the long-term funding that it needs. The management of the various components is referred to as the "structure." The business will require a combination of equity share capital, preference share capital, long-term loans, retained earnings, debentures, and other long-term funding sources to raise the total amount of capital required to fund its operations. The study utilized a random sampling technique, based on an examination of the capital structure found in the annual reports and accounts of fifteen well-regarded consumer- owned businesses from various economic sectors that were listed on the Nigeria Exchange Group market.

273

Artificial intelligence-Enhanced Prediction of Binding Interaction of Compounds from Euphorbia heterophylla against P. falciparum Erythrocyte Membrane Protein-1

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Abstract:

Despite the remarkable success recorded in the discovery of potent antimalarial drugs like the Artemisinin Combination Therapy (ACT), parasite resistance and high cost of antimalarial drugs have prompted the search for novel and less expensive compounds with improved antimalarial activity. Anti-inflammatory and anti-oxidant activities exhibited by Euphorbia heterophylla have been attributed to the presence of phytochemicals in the plant some of which have potentials to serve as novel antimalarial compounds. This study considers the antimalarial potential of Euphorbia heterophylla -derived compounds using artificial intelligence (AI)-enhanced molecular docking technique. It predicts the binding interaction of these compounds with chimera-prepared Plasmodium falciparum Erythrocyte Membrane Protein-1 (PfEMP1), a protein critical to P. falciparum invasion of the red blood cell during malaria infection. The two-dimensional structures of the compounds is retrieved from PubChem database and prepared using the Schrodinger maestro ligand preparation wizard. The compounds are desalted and possible Epik states and tautomers generated. They are then prepared for docking by adjusting their ionization states to match the physiological pH of 7.0 while the structures are optimized using an energy minimization process within the MacroModel software, employing the OPLS2005 force field. The AI model predicts the binding affinities and orientations of the compounds with PfEMP1 in comparison to a co-crystallised antimalarial compound (artesunate). The data obtained from this interaction potentiates the effectiveness of compounds from E. heterophylla against PfEMP1 and allows for further investigation of these compounds through in vitro and in vivo studies to validate their potential as antimalarial compounds.

Keywords: Artificial intelligence, Euphorbia heterophylla, Malaria, P. falciparum Erythrocyte Membrane Protein-1

258

Integration Renewable Energy Technologies and Sustainable Development

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Abstract:

Despite the considerable advantages of hydropower in Nigeria, there are untapped renewable sources such as solar and wind that could significantly contribute to power generation. This article explores the imperative of combining various renewable energy technologies to address the growing energy demand in Nigeria. Achieving sustainable, affordable, reliable, and modern energy for all, while mitigating climate change and reducing environmental and health impacts, aligns with the goals of sustainable development. To keep pace with the escalating demand, alternative methods of energy production must be devised as conventional power sources reach their limits. Renewable energy technologies offer hope not only for Nigeria but also for West Africa and the global community. The paper reviews the theoretical and technical potentials of various renewable energy technologies. Solar irradiation averages between 5.62 - 7.01 kWh/m2 in Northern Nigeria and 3.54 –5.43 kWh/m2 in the south, indicating greater solar potential in the north. The potential of wind and other renewable energy technologies is also examined. The cost of these technologies poses a barrier to their seamless integration for sustainable development. The article explores the interconnection between renewable energy and sustainable development, provides policy recommendations, and discusses the path forward to overcome barriers associated with renewable energy technologies.

Keywords: Renewable Energy, Technology, Sustainable Development.

277

Development of Farm Aggregator Management System

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Abstract:

The Design and implementation of a Farm Aggregator Management System involves the use of a web and mobile application-based platform. The system offers the facilitation of optimized management of farm activities, remote monitoring, using Unmanned Aerial Vehicle (UAV) for early detection of diseases, herbicides and pesticides spraying and farm monitoring. The FarmAgregators manages different types of users from organization administrative, supervisory and the farmers. The System Administrator manages and control all activities and assigning supervisor to farmers. Similarly, the second administrative right is responsible for managing the farmer reporting and allocation to the administrator via online. Thus, providing a centralized Farm Aggregator Management System for agricultural organizations industry for effective management and monitoring of farm activities.
The system utilizes computer vision, CNNs, and Transfer Learning to analyze plant images and classify healthy and diseased plants from acquired UAV images. Artificial Intelligence (AI) and conventional programming languages have been combined for mobile and web development, using supervised and unsupervised AI algorithms to train datasets and learn patterns and relationships.
The system has been developed with an excellent user-friendly interface, making it a valuable tool for agriculture. The system optimizes resources and farming activities, increasing food availability and growth.

Keywords: Agricultural Management System, Artificial Intelligence, Plant disease identification, Remote monitoring

284

Assesement of Nigeria Stock Market Efficiency using Deep Learning Algorithm

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Abstract :

Stock market are an essential part of a nation's economy, but its ability to fully impact on the economy however, depends on its efficiency. A stock market is said to be efficient if prices fully reflect all available information. While empirical studies have examine the efficiency of stock market in Nigeria (Adebanjo, Frank,& Eseyin, 2018; Victor, 2021), there findings are often contradictory as Victor (2021) for instance reported that Nigerian stock market is efficient, Adebanjo et al. (2018) reported that Nigerian stock market is inefficient.
The main objective of the paper is to examine the efficiency of the Nigerian stock market using machine learning model.
The advancement in technology have brought about emergence of AI based model which has been argued to be better in predicting and forecasting of financial information since it does not rely on the assumption of linearity on which the time series analysis is based. Hence, the study intends to employ AI-based deep learning algorithm in assessing efficiency of Nigerian Stock Market.
Accordingly, the following objectives would be pursued in the study:

(i) develop machine learning models for stock prices prediction in the Nigeria market; and
(ii) assess the efficiency of the Nigerian stock market by comparing the predictions made by machine learning models with actual market movements.
The secondary data to be used on stock market index of Nigeria from the period spanning from 2009 to 2022 would be obtained from the investing.com data base as well as the security and Exchange Commission data base.

251

The Impact of LED Lighting on Inverter Performance and Efficiency in Solar Systems

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Abstract

This paper explores how the use of LED lights in off-grid solar systems affects their performance. In simple terms, solar inversion converts direct current (DC) electricity from solar PV panels and batteries into alternating current (AC) used in homes, facilitating efficient utilization of solar energy. An important benefit of solar systems is providing power in areas without access to traditional electricity grids. However, integrating LED lights brings benefits like energy savings and better lighting. Furthermore, investigating the challenges at Summit University Female Hostel and Administration Block inverter system, the negative impact of LED lights on these systems creates fluctuations in operation and high current demand. Continuous use of the system strains the system, which potentially may lead to damage and a shorter lifespan of the system.
Additionally, investigating how LED lights could cause damage to solar off-grid inversion systems underscores significant risks if not managed properly. By understanding these issues, communities and experts can make informed decisions about using solar energy for lighting in off-grid areas.

Keywords: Energy efficiency, Inverter performance, LED lighting, Off-grid, Risk management

309

Promoting Digital Health and Technology in Nigeria through Collaborative Effort of the Industries and Universities

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PROMOTING DIGITAL HEALTH AND TECHNOLOGY IN NIGERIA THROUGH COLLABORATIVE EFFORT OF THE INDUSTRIES AND UNIVERSITIES

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Abstract:

One important way to address Nigeria's healthcare issues is to encourage digital health and technology in the country through industry and university collaboration. The Nigerian healthcare system is confronted with considerable obstacles in successful deployment and integration of digital health innovations. The creation of locally appropriate and long-lasting digital health solutions suited to Nigeria's healthcare requirements is hampered by the absence of strong collaboration stimulating innovation, research, and technology transfer in the field of digital health, universities, and industry must engage in meaningful collaboration. Universities can contribute research skills and academic resources by encouraging partnerships, and collaboration while the industry can offer resources, infrastructure, and practical ideas for scaling and implementing digital health solutions. Through knowledge sharing, capacity building, and innovation dissemination, such collaboration makes it possible to co-create digital health innovations that are appropriate for their respective contexts. Thus, Nigeria can increase healthcare fairness, quality, and access while removing obstacles to digital health adoption through strategic partnerships. Ultimately, this will change the country's healthcare system.

Keywords: Collaboration, Digital Health, Universities, Technology.

400

Assessing the income-generating potentials of Cryptocurrency for Nigerian Youths

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Abstract

Cryptocurrencies are internet-based private currencies that are rapidly evolving and gaining widespread popularity across the globe, especially among younger demographics. These digital currencies, characterized by their decentralized nature and reliance on blockchain technology, present a novel financial instrument that has the potential to transform traditional economic systems. This research work sought to examine the potential of cryptocurrency trading as a means to alleviate poverty among Nigerian youths and empower them economically. The study utilized a mixed-methods approach, integrating both qualitative and quantitative research techniques to provide a comprehensive analysis of the impact of cryptocurrency trading on the financial well-being of Nigerian youths. For the quantitative component, a purposive sampling method was employed to select a total of 400 respondents who are actively engaged in cryptocurrency trading. Statistical tools, including frequency distribution, simple percentages, correlation analysis, and cross-tabulation were used to analyze this

data. The qualitative aspect of the research involved in-depth interviews and focus group discussions with a selected group of cryptocurrency traders to gain a deeper understanding of their experiences, challenges, and perceptions regarding the economic benefits of cryptocurrency trading. The study reveals that Nigerian youths are significantly boosting their income-generating potential through cryptocurrency trading, demonstrating increased financial independence and entrepreneurial spirit. However, the study also highlights the risks of cryptocurrency trading, including volatile markets, regulatory uncertainties, and financial loss, and recommends Nigerian youths engage in it for self-employment and financial empowerment, but also calls for education.

Keywords; Cryptocurrency Trading, Blockchain, Income-generating, Nigerian Youths

134

The Intervention of Community Development Associations in Managing Farmers-Herders Conflict in Ekiti State, Nigeria

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Abstract

The ongoing conflict between farmers and herders in Nigeria has resulted in numerous peace threatened incidents, mostly in the northern region, but it has also become more prominent in the southwestern states of the country, such as Ekiti. The conflict appears to be unresolvable due to its resistance of various interventions. The study therefore examines the intervention of community development associations in managing farmers-herders conflict in Ekiti state, Nigeria. The study adopted the frustration-aggression and stakeholders' theory to explain the causes of the conflict, and interventions of the CDAs in the study area. Qualitative method was the research design adopted for this study. 42 respondents participated in the Key Informant Interview and In-depth Interview selected through snowball sampling technique. The study reveal using of underage children for herding, claim of citizenship, physical development of the community, migrant herders as some of the causes of the conflict while the CDAs intervenes through negotiation, mediation, dialogue and reconciliation. However, following the findings, it is concluded that the CDAs have been able to intervene in farmers-herdsmen conflict successfully in their communities serving as a platform for conflict management. Though, the conflict persist but the intervention of the CDAs has help to reduce the rate of occurrences. Nevertheless, the government should enhance capacities of the CDAs through conflict prevention and management workshops, and peace education so as to serve as compliments to other measures of ending farmers-herders conflict.

Keywords: Conflict Management, Community Development Associations, Farmers, Herders

248

Comprehensive Training in Printed Circuit Board (Pcb) Design and Manufacturing: A Course Overview

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Abstract

In today's rapidly evolving world, the demand for knowledge in Printed Circuit Board (PCB) design and manufacturing is paramount. This overview introduces comprehensive course material aimed at equipping participants with fundamental knowledge and practical skills in PCB technology. Covering essential components, design methodologies, fabrication processes, assembly techniques, and quality assurance. The course material provides a thorough understanding of PCB technology. Through a blend of theoretical insights, practical examples, and interactive exercises, participants are guided through an engaging learning experience. Each module delves into specific aspects of PCB technology, offering step-by-step guidance to mastering PCB design and manufacturing. With practical sessions, case studies, and visual aids incorporated throughout, participants gain hands-on experience and real-world insights. By the course's conclusion, participants will possess the expertise to design, fabricate, and assemble single-sided, double-sided, and multilayer PCBs, thereby contributing to the advancement of electronic devices and systems. Whether novice or experienced, this course material offers valuable insights and practical skills for anyone seeking excellence in PCB design and manufacturing.

Keywords: Printed Circuit Board (PCB), PCB design and fabrication, PCB assembly, Quality assurance,Training course.

250

Smart Analysis of Silver Nanoparticles and Bioflocculant Activity in Wastewater Treatment

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SMART ANALYSIS OF SILVER NANOPARTICLES AND BIOFLOCCULANT ACTIVITY IN WASTEWATER TREATMENT
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Abstract

Wastewater simply refers to water that has been used and contaminated, often in household, industries, or agriculture. The study presents the effects of consortium of silver nanoparticles and bioflocculants produced by two microorganisms collected from Summit University Microbiology Laboratory. The organisms were previously isolated from the Afelele River, Offa, Kwara State and confirmed to be Pseudomonas sp. and Bacillus sp. Bioflocculant was produced using constituted biolflocculant culture broth and silver nanoparticles (AgNo3) was synthesized using neem plant (Azadirachta indica). The flocculating activities after Day 7 of shaking were 71.6% and 60.7% for Pseudomonas sp. and Bacillus sp. respectively while AgNO3 had the least (58.5%). The consortium of AgNo3 and bioflocculant from Pseudomonas sp. had the highest flocc activity of 89.5% depicting

higher activity than single usage. These results suggest synergistic reaction between the nanoparticles and bioflocculant yielding better activity in the treatment of wastewater. The application of smart analysis of the flocculating and nanoparticles activities reduced human error and enhanced result accuracy.

Keywords: Silver Nanoparticles, Bioflocculants, Artificial Intelligence, Wastewater, Neem Plant.

154

Waste to Wealth: Harnessing Cassava Peel Value Chain to Drive Circular Economy in Nigeria

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Abstract

The Cassava peel value chain can contribute significantly to the bio-economy of Nigeria, the world's largest producer through the circular economy opportunities it offers. For instance, it provides sustainable substitutes for traditional resources, like high-quality cassava peel mash, encouraging waste conversion, and cultivating closed-loop systems that reduce environmental pollution and enhance economic stability. However, the cassava peel value chain in Nigeria is weak and there is a paucity of information about the value chain actors. To implement evidence-informed interventions, there is a need to understand the current dynamics in the Nigerian cassava peel value chain sector. We thus examined the socioeconomic profile of cassava peel value chain actors; assessed the cassava peel value chained activities; analyzed the profitability of participating in the cassava peel value chain and the determinants of profitability; as well as examined the constraints faced by these actors using descriptive statistics, gross margin analysis, and Ordinary Least Square regression analysis, and Semantic differential scale respectively. The study relied on primary data obtained from 438 cassava peel value chain actors randomly selected from three States in Southwestern Nigeria. Our result reveals that the majority of the cassava peel actors are peelers, 183 (41.78%), and local processors, 190 (43.37) who rely mainly on traditional processing methods. The actors realize an average monthly gross margin of ₦54, 641 ($ 54.83). The monthly expenditure. monthly income, education, and household size of actors are the drivers of profitability (P value, 0.05). The instability of cassava prices, inadequate access to credit facilities, and the high cost of hiring labour are the pressing constraints faced by the actors. Efforts should be geared towards the stabilization of cassava prices as well as the provision of credit facilities in other to improve the cassava value chain.

199

Stem-bark of Ficus spp: A novel source of active constituents against root-rot fungi

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Ficus exasperata leaf has traditionally been reported for managing hypertension and controlling insect pests in the agro-economic areas of Kwara-South, Nigeria. The objectives of this study were to extract phytochemical components from Ficus exasperata leaves and stem-bark, evaluate the in-vitro antifungal activity of aqueous extracts against Fusarium solani, the causative agent of root-rot in crops, and identify the major active constituents in the bioactive extracts. The yields of extracted phytochemicals in aqueous leaf and stem-bark extracts of Ficus exasperata were 32.2% and 21.97%, respectively, while protein contents were 12.50% and 5.58%, respectively.Using the agar well diffusion method, the aqueous stem-bark extract of Ficus exasperata exhibited significant inhibition of 76.51% at 50 mg/ml against mycelial growth of Fusarium solani compared to the control (Fluconazole). However, no significant clearance zone of mycelial inhibition was observed for the aqueous leaf extract at concentrations of 10, 25, and 50 mg/ml. Preliminary phytochemical screening showed that the aqueous stem-bark extract contained high levels of flavonoids and alkaloids. Similarly, the total phenolic content and flavonoids obtained in the aqueous stem-bark extract were 4.09 mg GAE/100 g and 0.04 mg QE/100 g, respectively.Moreover, gas chromatography-mass spectroscopy (GC-MS) analysis for identifying principal active constituents revealed 18 different components in the aqueous stem-bark extract, with linoelaidic acid (21.81%) being the most abundant, followed by butanoic acid (15.25%). Therefore, the aqueous extract from the stem-bark of Ficus exasperata may be considered a valuable source of promising pharmaceutically active constituents or antifungal agents.

Keywords: Ficus exasperata; stem-bark; active constituent; root-rot; linoelaidic acid; antifungal-agents

228

Pyrus communis leaf extract protects the heart, liver and kidney of methylprednisolone-hypertensive rats

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Abstract

Hypertension is a global health concern often linked with heart, liver and kidney issues due to oxidative stress. This study investigated the protective and redox-modulating effects of Pyrus communis leaf extract in methylprednisolone-induced hypertension in female rats. Twenty-five female Wistar rats were grouped into A –E, each with 5 rats. Group A served as the control rats while groups B – E were administered a single dose of 20 mg/kg b. wt methylprednisolone for induction of hypertension, thereafter, they were given normal saline, 2.8 mg/kg b. wt of Amlodipine, 200 and 400 mg/kg b. wt extract respectively. The extract was screened for the presence of secondary metabolites. The effects of the extract on the redox profile of the heart, liver and kidney of the methylprednisolone-induced hypertensive rats were assessed via the specific activities of catalase, superoxide dismutase (SOD) and the levels of malondialdehyde and reduced glutathione.

The extract contained saponins (342.566 mg/L), phenolics (142.98 mg/L), tannins (96.77 mg/L), flavonoids (20.74 mg/L), alkaloids (7.05 mg/L), glycosides (95.86 mg/L), and terpenoids (49.75 mg/L).

Methylprednisolone-induced hypertension incurred a significant ($p < 0.05$) decrease in the specific activities of catalase, SOD and the level of reduced glutathione while the level of malondialdehyde was significantly elevated in the selected tissues. Treatment of the rats with the aqueous leaf extract, ameliorated the methylprednisolone mediated changes in the redox system. P. communis leaf has the potential to protect cell damages and maintain the equilibrium between oxidant and prooxidant, offering a safer and more sustainable option to managing hypertension.

Keywords:Prediction of Malaria Using Cnn and Svm: A Systematic Review

315

Artificial Intelligence Revolution in the World of Humanities and Arts

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Abstract
Artificial intelligence (AI) is rapidly transforming various sectors, fundamentally reshaping our understanding of culture, history, and creativity. This paper explores the symbiotic relationship between AI and human ingenuity in the humanities and arts. It examines how AI can analyze vast datasets, generate creative content, and preserve cultural heritage, pushing the boundaries of artistic expression and intellectual pursuits.
The paper delves into specific applications, including AI-powered music composition and historical research, while acknowledging ethical dilemmas surrounding copyright and authorship. Through compelling case studies like "The Next Rembrandt" project and Google's Magenta, the paper showcases the potential of AI to augment human creativity and foster innovation.
In conclusion, it emphasizes the importance of multidisciplinary collaboration to navigate this new era and ensure technology and creativity coexist in harmony. By ensuring technology and creativity coexist in harmony, we can unlock the full potential of AI to enrich the humanities and arts, while addressing potential pitfalls and shaping a future where human and machine intelligence co-create a more vibrant cultural landscape.

Keywords: Artificial intelligence, Collaboration, Creativity, Cultural Heritage, Humanities

260

Evaluation of Structural Pattern over sheet-96, North Western Nigeria from Aeromagnetic Studies

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Abstract:

High resolution aeromagnetic data interpretation over shanga (96) NW Nigeria was carried out with the aim of delineating the structural patterns of the study area. Quantitative and qualitative interpretations were done on the aeromagnetic data to produce the total magnetic intensity map (TMI) and its derivative maps using oasis Montaj software. The magnetic signatures were identified putting in consideration the geological settings of the area in order to delineate its structural pattern. The results from total magnetic intensity map indicate variations in values between 32999.8 nT to 33111.3

nT. The second vertical derivative map enhanced the first vertical derivative showing concentration of structures mostly fractures, joint in the northeastern part of the study area. The orientation and length of the lineament extracted from the Vectorization map were displayed to analyse the spatial distribution of lineaments and also to contribute to the understanding of the directions of the structural control of the study area. The structures trend in E-W and NE-SW with minor NW-SW directions. Tectonic activities in the study area give rise to different structural styles like anticlinal and synclinal folds, faults, fractures.

Keywords: Pattern, Structures, Aeromagnetic Data, Northwestern Nigeria and Vertical Derivatives

261

AI-based Activity Analysis and Culture Modification for Bio-flocculant Production

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ABSTRACT:

Water pollution stands as a pressing global concern, imperiling both human health and environmental integrity. Employing flocculation, a prevalent method, to combat water pollution involves the elimination or reduction of non-degradable colloids and suspended particles through inorganic or organic means. While inorganic flocculants often pose hazards due to toxicity, bioflocculants, extracellular polymers produced by microorganisms during cellular growth, offer a biocompatible alternative. This study delves into the impact of varied culture conditions on the flocculating activity of bioflocculants derived from diverse microorganisms isolated from Hengee River, Offa, Kwara State. Medium M2, comprising Lactose, yeast extract, MgSO4.7H2O, K2HPO4, and KH2PO4, demonstrated fluctuating flocculating activities over Days 3 and 7, with Bacillus sp. displaying the highest efficacy at 43% and 31%, respectively. Conversely, Medium M1, consisting of Sucrose, Urea, KCl, KH2PO4, and K2HPO4, showcased Klebsiella sp. with the lowest activity after Day 5, and Bacillus sp. with the highest at 72%. Pseudomonas sp. exhibited the overall highest activity at 82%, suggestive of its potential for wastewater treatment. The integration of artificial intelligence to analyze flocculating activity underscores a promising avenue for reducing errors and enhancing accuracy. This study underscores the efficacy of bioflocculants, particularly those from Medium M1, for wastewater treatment applications, emphasizing their superiority over Medium M2 counterparts.

Keywords: Klebsiella sp., Pseudomonas sp., Culture, Bioflocculant, Wastewater.

316

AI-Powered Smart Glasses for Eye Health: A Review of Technologies for First-Aid and Early Disease Detection

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Abstract:

This review paper examines the emerging field of AI-powered smart glasses for eye health. These glasses, integrating AI algorithms with wearable technology, hold promise for revolutionizing both first-aid eye care and early disease detection.
We analyse the design principles, technical components, and functionalities of these glasses, with a focus on their ability to provide real-time guidance and assessments for minor eye injuries and conditions. Through critical analysis of current research, this paper explores the potential of AIassisted smart glasses to empower individuals in proactive eye health management and disease prevention.
However, limitations and challenges are addressed. Data privacy concerns and the need for robust clinical validation are crucial considerations. Finally, the paper explores the future of AI smart glasses in eye health, outlining potential advancements and areas for further investigation.

Keywords: AI-powered Diagnostics, Clinical Validation, Data Privacy, Disease Prevention, Eye Care.

160

Maize Farmers'Perception Of Climate Change In Asa Local Government Area, Kwara State, Nigeria

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Abstract
Worldwide, climate change poses a significant risk to agricultural systems and in Nigeria, it has altered the rainfall pattern, causing rising temperatures and extreme weather events that threaten maize production, a vital staple crop which provides food security and rural incomes. A survey of 240 maize farmers examined sources of information, awareness, perceptionand constraints faced on climate change adaptation strategies by maize farmers' in Asa Local Government Area, Kwara State, Nigeria. Most farmers perceived climate change (mean=4.78) as posing long-term threats to livelihood(mean=4.78), which affected their planting seasons, yields, costs, profits and key constraints to adaptation included limited finances (mean=2.90), information (mean=2.41), and institutional support (mean=2.31). A Pearson Product Moment Correlation result showed that having formal education (r=0.725) and extensive farming experience (r=0.517) positively correlated with climate change perceptions and knowledge gaps existed regarding locally documented climate impacts and human activities. Strengthening climate education, forecasting tools, financing are critical for adaptation while better climatic actions from the government and agricultural agencies would promote resilience. Findings indicated the need for multifaceted policies and programme in order to enhance farmers' climate literacy, resource access, and capacities to implement adaptive practices which sustain productivity amidst climate risks.

Keywords: Climate change, Perception, Adaptation.

323

Water Parameter Measurement Technique in Aquaculture: A Review

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Abstract:

Water quality is critical in aquaculture, poor water quality can lead to environmental issues like eutrophication and harmful algal blooms. Water can affect production as well as product quality. Organic contaminants can result from incomplete combustion of materials. Nutrient inputs from non-point sources also impact water quality. Monitoring water quality parameters like dissolved oxygen, ammonia, pH, and temperature is essential for aquatic species' health and maximizing production. Optimizing water quality is vital in aquaculture, it involves monitoring key parameters like dissolved oxygen, ammonia, pH, and temperature. Advanced technologies, including sensors and IoT applications, enable real-time monitoring and automation. Predictive models can help to make informed decisions. Poor water quality can lead to environmental problems and ensuring good water quality is crucial for both industry success and aquatic ecosystem sustainability. Advanced technology, such as sensors and IoT applications, enables real-time monitoring and automation. Predictive models can help aquaculturists make informed decisions. Ensuring good water quality is crucial for industry success and aquatic ecosystem sustainability.

Keywords: Aquaculture, water quality, monitoring, technology and, sustainability.

217

A Right Based approach to Issues of Business and Human Rights and the Role of tertiary Institutions in Nigeria

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ABSTRACT

Until recently the concept of business as a human right received was very low. However, with the growth of the jurisprudence of the rights that should be respected within the business sphere, it become imperative that it is examined. It is therefore the argument of this paper, that business and human rights activities should be approached through the human rights prisms. The article argue on such concepts as the right to self-determination under article 21 of the African Charter and also the United Nations Declaration on the Right to Development. A preliminary conclusion reached is that for proper perspectives to be provided, tertiary institutions have a pivotal role in ensuring that the legal consciousness of the people on the inherent issues in business as a human rights is established. The researcher employed the use of doctrinal methodology by consulting some literatures, and all other sources of relevant materials from the internet, journals, newspaper reports, conferences and seminar papers. The paper will make comparative analysis and analogy of the best practices on the question will be adapted to enhance the situation in Nigeria.

Keywords: Awareness, Sustainability, Business activities, University Curriculum, Human life.

190

Regional Volatility Linkages: Impact of Neighbouring Currencies on Nigeria's Currency Instability

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Abstract

This study examines the effect of the exchange rate volatility of Nigeria's bordering countries' currencies, namely the Benin Republic, Niger, Chad and the Cameroon Republic on Nigeria's exchange rate volatility using monthly observations for 1st January 2001 to 31st December 2021. The study will employ the Generalised Auto-Regressive Conditional Heteroscedasticity method to analyse the dataset. The expected result is that fluctuations in the currencies of neighbouring countries (Benin Republic, Niger, Chad, and the Republic of Cameroon) would have a significant impact on the volatility of Nigeria's Naira.

291

Artificial Intelligence and Website-Based Personalized News Aggregator

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ABSTRACT:

News Aggregator, a website or application that gathers news contents and stories from multiple sources and publishes the stories on a platform for ease of access for the readers. However, the overwhelming amount of online news stories and sources coupled with limited time for reading necessitate development of personalized news aggregator. A news aggregator can be personalized by enabling a recommender model using Artificial Intelligence (AI) technique to ensure that the reader's feeds are being populated with the corresponding news interest. This study developed web-based AI personalized news aggregator using React.js, Node.js and MySQL for Frontend, backend and creation of database respectively and integrating the ALAN AI recommender model for generating stories based on user preferences. In conclusion, the developed AI and Web Based Personalized News Aggregator aid the readers in effective time management and ease of access to their corresponding news interest.

Keywords: ALAN AI, News Aggregator, Personalized, Web-based.

189

Analysis of Technical Efficiency of Smallholder Plantain Production in Osun State, Nigeria.

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Abstract

The study investigated on the plantain farmers'technical efficiency in Osun state, Nigeria. Primary data collected were analysed using stochastic frontier function, ordinary least square regression and likert type scale analysis. Evidence from the result indicated that plantain production in the study area was dominated by married males. The dominance of males in the plantain production confirmed the fact that males are the household heads and therefore, in charge of the core farm production activities while women are mostly into processing and marketing. The majorities of respondents (63.33%) were relatively in middle aged group above 40 year which reveals that they were still in their active productive age. The production function showed that the coefficient of regression for labour, sucker and fertilizer were positively significant at different levels, while farm size was negatively significant 5%. The factors that influencing technical inefficiency (age, level of education, farming experience, cooperative membership, disease infestation and distance to market) were found to be negatively significant at various levels.
The major constrains associated with plantain production are: disease infestation, unavailability of fertilizer, government intervention, distance to the market and pricing. In conclusion, the farmers were highly efficient in their production at the present level of technology and there are substantial opportunities to increase productivity through more efficient utilization of productive resources. The study recommended that Farmers should engage in useful training to keep themselves updated on new ways to utilize available resources efficiently for increased productivity.

Keywords: Plantain sucker, productive resources, stochastic frontier, technical efficiency

295

ARTIFICIAL INTELLIGENCE BASED SMOKE DETECTION SYSTEM

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ABSTRACT

Smoke detection systems are essential components of fire safety measures, playing a critical role in preventing and mitigating the devastating effects of fires. However, traditional smoke detectors often face challenges such as false alarms and delayed response times, which compromise the effectiveness in detecting and alerting occupants to potential fire hazards. The development of an inventive Artificial Intelligence (AI) based smoke detection system are the main objectives of this study. This system seeks to reduce false alarms while optimizing smoke detection accuracy and reliability through the utilization of artificial intelligence (AI) algorithms. The development process makes use of Proteus design software to simulate the behavior of the system. The structure of the smoke detector system is designed and virtually simulated only through schematic design. Thorough testing and analysis are used to evaluate how well the system works and reacts to simulated smoke events. The result shows the Proteus simulation-based performance evaluation, real-time testing was done to confirm the system's operation. In conclusion, by incorporating artificial intelligence algorithms, the system demonstrates improved precision and effectiveness in identifying smoke and possible fire situations. The findings, which were obtained using Proteus simulation, demonstrate the system's capacity to minimize false alarms while achieving high detection accuracy.

Keywords: Artificial Intelligence, Fire Safety, Scenario, Simulation, Smoke Detection.

308

Prediction of Photochemical Constituents in solvent extracts from Dioscorea dumetorum Tubers Using Artificial Intelligence

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Abstract:

Dioscorea dumetorum tubers, known as bitter yam, hold promise for both nutrition and medicine. The rich nutrient and phytochemical content of its two major cultivars (white and yellow) contribute to various therapeutic activities, including anti-inflammatory effects. Traditionally used to manage ailments like jaundice, malaria, and diabetes, this plant offers a wealth of potentially valuable pharmaceutical compounds. However, traditional methods for identifying these phytochemicals are labour-intensive and time-consuming. This study explores the use of Artificial Intelligence (AI) for faster prediction of their phytochemical compounds using Deep Learning (DL). DL, an AI technique, utilizes layered neural networks to analyze solvent extracts from Dioscorea dumetorum tubers and predict their phytochemical constituents. The solvent type used in the extraction process such as methanol, water, or ethanol is encoded as a categorical variable. The output data comprises known phytochemical constituents identified in the plant using traditional methods represented in different ways including binary classification, multi-class classification and concentration prediction. A large dataset of plant extracts with known phytochemical profiles is used to train the model. The model learns the relationships between solvent extracts, and the presence or concentration of phytochemicals. This research underscores the growing role of AI in Science, Technology, Engineering, and Mathematics (STEM), with promising applications in pharmaceutical science. It further provides a quicker and more efficient way to reveal the potentials of bitter yam and other medicinal plants.

Keywords: Dioscorea dumetorum, photochemical constituents, artificial intelligence, solvent extracts

193

Securing the Rights of Farmers Amisdt Rising Insecurity in Nigeria: Challenges and Solutions

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Abstract

The agricultural sector in Nigeria serves as a fundamental pillar of the nation's economy, providing sustenance and livelihoods for a significant portion of the populace. However, the sector is increasingly besieged by escalating insecurity, placing farmers in precarious positions regarding their rights to land, livelihood, and life. This paper utilizing the doctrinal research methodology delves into the legal intricacies surrounding the challenges faced by farmers in securing their rights amidst pervasive insecurity. Primarily, the paper conducts a thorough analysis of the underlying legal and regulatory frameworks governing land tenure, property rights, and conflict resolution mechanisms pertinent to agricultural activities in Nigeria. It scrutinizes the efficacy of these legal provisions in addressing the specific vulnerabilities encountered by farmers in the wake of escalating insecurity, particularly pertaining to farmer-herder conflicts, insurgency, and banditry. In proposing solutions, the paper advocates for legal reforms aimed at bolstering the protection of farmers' rights in the face of insecurity. This includes legislative measures to strengthen land tenure security, facilitate equitable dispute resolution, and improve coordination between law enforcement agencies and agricultural stakeholders. Moreover, the paper underscores the imperative of integrating legal perspectives into broader policy initiatives aimed at addressing the root causes of agricultural insecurity, including socio-economic disparities, resource competition, and governance deficits. It emphasizes the need for a holistic approach that harmonizes legal frameworks with socio-economic development strategies to ensure sustainable solutions to the challenges confronting farmers in Nigeria.

Keywords: Agricultural Insecurity, Herdsmen, Farmers, Terrorism, Land Ownership

433

Numeric Innovation for Sustainable Development of The Developing Nations

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This study addresses the theoretical, and accepts that Nature or God, Allah (SWT) created many different things to test mankind (Q, 67: 2), and would reward all deeds of man (Q, 4: 123 124; and Q, 99: 17 18 etc.). It reviews the empirical literature related to 'Dot'and divine revelation of Arabic Letter Nun (ALN), ,(ﻥ) in the Qur'an (Q, 68: 1), for nothing is created without purpose (Q, 3: 191). Pictorial Method of Data Analysis (PMODA) is used to explain ALN from beginning to its nub to discover a new set of numerals called 'Naturally Unbiased and Undeniable Numeral'(NUAUN). NUAUN is: ˙ . , l, /, _, ,ﻥ ﻥ, ₇, ﻥ, ﻥ , and ˙˚ representing Arabic numeral: 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 respectively. After ten, the ˚ is numeral zero. The paper experiments the naturality, unbiasness, and undeniability of NUAUN with Compass and thirty-nine Quantitative Symbols. NUAUN is better than all previous numeral discoveries from ALN because it prevents fraud and minimizes cost of documentation above others, for sustainable development of developing nations. Developing Nations are advised to utilize NUAUN in their Curricula and strive to initiate new Alphabets.

124

Empirical Analysis of Causes and Consequences of Inadequate Food Verities in Pategi Local Government of Kwara State

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Abstract

This paper investigated empirically the causes and implication of malnutrition among households in Pategi Local government of Kwara state. Primary and secondary data were used in generating relevant data. The primary data was source with the aid of a questionnaire while the secondary data were obtained through documented materials on the topic. The sample size of respondents was 100 taken from the ten words in Pategi Local Government. The sample technique adopted was stratified and simple random sampling technique. The paper used simple table, percentage, frequency and tables in the analysis of data for study. Based on that, the article identified the causes of inadequate food verities include lack of enough seed's varieties of food, improper funding of farming and poor farm tools. The consequences of inadequate food varieties are malnutrition, hypertension, diabetes, arthritis, gout, and heart diseases among others. The paper recommends improving program and policies that ensure availability and proper management of nutritious food, farmers should be encouraged to cultivate more nutritious food and protecting consumers through improve food quality and safety.

Key words: Food Varieties, Food Security, Food Insecurity and malnutrition

266

Curbing Antimicrobial Resistance Menace in Africa through AMR Diagnostic Standardization and other Innovative Solutions

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Africa has the highest burden of antimicrobial resistance (AMR). Globally, with the emergency of multidrug-resistant organisms, AMR is increasingly recognized as a major public health threat, with hundred thousand of death, and enormous economic loss reported yearly. Toward sustainable future, proactive measures must be put in place to curb AMR menace. This review investigates the impact of AMR in Africa, also comprehensive search of scientific databases for practical measures in curbing these threats are highlighted. The present status of AMR surveillance in West Africa is also reviewed, with emphasis on AMR diagnostic standardization and other Innovative solutions. To manage bacterial infections appropriately, promising technologies for pathogen detection and development of standard rapid diagnostic tests is recommended at the point-of-care, which will serve as a guide in understanding bacterial spread and resistance. Though, several methods have been put in place in some West Africa countries to curb AMR menace, more National action plans in tacking AMR still needs to be implemented across the board. Exploration and the use of AMR diagnostic standardization inform of development and implementation of consistent and reliable methods for diagnosing antimicrobial resistance in pathogens as a potential solution and other innovative solutions are recommended. Conclusively, a clarion call for synergistic multidisciplinary action and strong multisectoral collaboration among stakeholders; Ministries of Health and Agriculture, Government Policy makers, Universities, Research Institutes and Industries in each country of Africa towards the development of diagnostic standards and innovative solutions and the implementation to tackling AMR menace is therefore urgently required.

Keywords: Antimicrobial resistance, Africa, Bacteria, Surveillance, Diagnostic.

322

Critical Review on Gender Analysis in African Aquaculture System

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Abstract:

This comprehensive review critically examines the intersection of gender dynamics and aquaculture practices in the context of Africa. With a focus on gender analysis, the review delves into the multifaceted roles, challenges, and opportunities that women and men encounter in the aquaculture sector across the African continent. The study explores the implications of gender-related factors on various aspects of aquaculture, including production, resource access, decision-making processes, and community development.

Drawing on a diverse range of scholarly sources, the review provides an in-depth analysis of existing literature, highlighting gaps and inconsistencies in current research. It critically evaluates the methodologies employed in gender-sensitive aquaculture studies and assesses their relevance in capturing the complexity of gender relations within the African aquaculture context. Moreover, the review explores the socio-cultural, economic, and policy dimensions shaping gender roles in aquaculture and their impact on sustainable development.

Through this critical lens, the review aims to contribute to a nuanced understanding of gender dynamics in African aquaculture, offering insights for policymakers, researchers, and practitioners to foster more inclusive and equitable approaches in the development and management of aquaculture initiatives. The synthesis of existing knowledge and identification of research gaps seek to guide future investigations that can further inform gender-responsive strategies for enhancing the resilience and sustainability of aquaculture in Africa.

Keywords: Aquaculture, Gender Analysis, Gender Dynamics, Sustainable Development

306

Harnessing Renewable Energy For Sustainable Development: Insights From University-Industry Collaborative Efforts In Nigeria.

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Abstract:

The African continent faces significant challenges in gaining access to clean renewable energy sources, as energy plays a crucial role in both socioeconomic development and the elimination of poverty. Approximately 60 - 70% of Nigerians do not have access to clean source of energy at this time. Without a doubt, as long as the government of Nigeria doesn't diversify its energy sources for industrial, commercial and domestic sectors, the country's current energy crisis will continue. Using qualitative research methodologies ranging from interviews and surveys, the study will look into the dynamics, challenges and results of joint initiatives between Universities and Industry stakeholders in the renewable energy field.Key outcomes of this research will spell out the crucial role of University –Industry initiative in forging new frontiers in technological development, transmission of knowledge and enhancing capacity within the renewable energy sphere. Universities and Industry stakeholders

have been instrumental in accelerating the development and implementation of renewable energy solutions that are customized to specific local needs and context through cooperative research projects and technology transfer initiatives.Furthermore, this research will clarify the obstacles and difficulties that arise when promoting efficient cooperation, encompassing everything from financial and institutional restraints to legal impediments and deficiencies in knowledge.This research will offer insights and recommendations to policy makers, academia and industry stakeholders to enhance the efficacy of University-Industry collaborations in advancing renewable energy solutions. By fostering an enabling environment for partnership, promoting interdisciplinary research, and investing in human capital development.

Key Words: Renewable Energy, Sustainable Development, University-Industry Collaboration, Nigeria, Energy Innovation.

254

Prostate Cancer Detection using Artificial Neural Networks

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Abstract:

The existing problem in histopathological analysis, particularly in the context of prostate cancer detection, lies in the accuracy and efficiency of identifying cancerous tissue regions. Traditional methods rely heavily on manual inspection by histopathologists, which can be time-consuming, subjective, and prone to errors. Moreover, as the dataset grows larger, the manual analysis becomes increasingly impractical. Prostate cancer is chosen for this study due to its prevalence and the challenges associated with its accurate detection and diagnosis. It is one of the most common types of cancer among men, and early detection is critical for effective treatment and improved patient outcomes. The choice of Artificial Neural Networks (ANNs) is driven by their capability to process large amounts of data and identify complex patterns within the data. ANNs excel in tasks like image recognition and pattern detection, making them well-suited for histopathological analysis. In this study, ANNs are employed to automate the process of prostate cancer detection, providing a more efficient, accurate, and scalable solution compared to traditional methods. Leveraging a dataset comprising over 2.6 million tissue patches from 430 fully annotated scans, along with binary diagnoses and independent diagnoses provided by histopathologists, our approach aims to accurately detect cancerous tissue regions. Employing ensembles of deep neural networks operating at different scales, accuracy of 94.6% in patch-level recognition was achieved. By utilizing ANNs, a robust framework for prostate cancer detection, demonstrating the efficacy of deep learning techniques in histopathological analysis.

Keywords: Artificial Neural Networks, Histopathological dataset, Patch-level recognition, Prostate cancer detection.

152

Formulation of a Classical Hermite-Based Eight-Step Model as an Elliptic-Type PDEs Direct Integrator

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Abstract

This paper presents a new eight-step elliptic partial differential equation integrator (EEPDEI). The EEPDEI has its nodes within the eight-step interval and targets elliptic partial differential equations on the two-dimensional domain. A collocation approach is adopted to develop this method, while a Hermite polynomial is employed as the basis function. The interpolation points are carefully selected at the two desired points and at all the suitably preferred grid and off-grid points. By uniting the resulting equations and evaluating them after some simplification, the classical EEPDEI is obtained. Investigating the numerical properties of the EEPDEI, it was confirmed that the EEPDEI is zero-stable and consistent. The accuracy and efficiency of the EEPDEI were established by solving varying elliptic partial differential equations.

Keywords: Collocation, Consistency, Convergence, Interpolation and Zero Stability

249

Diy Led Lamp Crafting: A Sustainable Approach to Lighting

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Abstract

As the world shifts towards a more sustainable future, understanding how to produce eco-friendly LED lights can make a significant impact on our environment. This comprehensive DIY LED lamp crafting course, "DIY LED Lamp Project," offers a step-by-step guide on how to design and build unique LED lamps using sustainable materials and practices. Through a series of engaging lessons, learners will master the skills necessary to create functional and innovative LED lamps while minimizing waste and reducing carbon footprint. The course covers essential topics such as assembly techniques, creativity, LED production, safety guidelines, and hands-on learning, all through the lens of sustainability. Learners will gain practical experience and develop the confidence to produce their own eco-friendly LED lamps, exploring various design possibilities and creative applications. Upon completing the course, learners will possess a comprehensive understanding of sustainable LED lamp production, enabling them to pursue their own creative projects and contribute to a more environmentally conscious community. This course is ideal for DIY enthusiasts, makers, and anyone interested in learning a new skill that benefits the planet.

Keywords: Assembly techniques, Creativity, Hands-on learning, LED production, Sustainability

151

Effects of gamma irradiation on five days submergence tolerance of two selected varieties of lowland rice (Oryza sativa L.)

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Abstract

The objective of this study was to evaluate the impact of varying doses of gamma irradiation on agro-morphological characteristics during simulated flooding of two rice varieties (FARO 44 & FARO 60), aiming to determine the most effective radiation dose for inducing genetic variability for submergence tolerance. Seeds of FARO 44 and FARO 60 were sourced from the National Cereal Research Institute (NCRI) in Badeggi, Nigeria, and subjected to different doses of gamma irradiation (0, 50, 100, 150, & 200 Gy) at the Center for Energy and Research Training in Zaria, Nigeria. The treated and control seeds underwent submergence evaluation in a Randomized Complete Block Design with four replicates each. Each experimental container was submerged for 5 days and allowed to grow until harvest after the submergence period. Results indicated that gamma irradiation significantly ($P \leq 0.05$) improved the survival rate of FARO 44 after submergence, with 150 Gy and 200 Gy resulting in the highest survival percentage (93.75%) compared to the control (68.75%). Irradiation doses of 150 and 200 Gy had significant positive effects ($p \leq 0.05$) on the plant height and yield of FARO 44. In the case of FARO 60, 200 Gy and 150 Gy doses of gamma irradiation (100 Gy) significantly ($p \leq 0.05$) influenced the days to 50% flowering and weight of 100 grains (g) respectively. Additionally, gamma radiation doses of 150 Gy and 200 Gy were observed to positively impact the submergence tolerance indices of FARO 44. Further research is recommended to explore the submergence tolerance of the promising mutants identified in this study.

Keyword: FARO 44; FARO 60; Gamma irradiation; Submergence tolerance

259

Pipeline Leakage Prediction using Artificial Intelligence: A Review

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Abstract:

Efficient management of pipeline infrastructure is paramount for the safe transportation of fluids such as oil, gas, and water. However, aging pipelines pose significant challenges in terms of maintenance, integrity management, and risk mitigation. Predictive modelling has emerged as a powerful tool to address these challenges, enabling proactive maintenance strategies and enhancing the resilience of pipeline networks. Recent advancements in predictive models for pipeline infrastructure management, with a particular focus on failure anticipation, leakage prediction, corrosion profiling, burst detection, and condition assessment. Ten notable studies are synthesized, each employing diverse methodologies, including regression techniques, Artificial Neural Networks (ANN), and acoustic methods, to tackle the multifaceted challenges associated with pipeline maintenance and integrity management. These predictive models leverage a wide range of input parameters, encompassing product type, pipe characteristics, environmental factors, and operational variables, to forecast various aspects of pipeline behaviour. By incorporating such diverse inputs, these models offer a general understanding of pipeline performance, enabling operators to make informed decisions regarding maintenance and resource allocation. This review explores specific areas of predictive modelling,

such as failure anticipation, where studies have proposed novel predictive models utilizing regression techniques and ANNs to forecast potential failure types based on various input parameters. Similarly, in leakage prediction, innovative models have been developed using neural networks and acoustic methods to forecast leakage occurrence time and magnitude, thereby improving proactive leakage control and maintenance scheduling for water distribution systems. Overall, it highlights the importance of predictive modelling in pipeline infrastructure management and highlights the valuable insights offered by these models for proactive maintenance planning, risk mitigation, and optimization of pipeline management strategies.

Keywords: Acoustic methods, Aging pipelines, Corrosion profiling, Predictive modelling, Regression techniques

16

Inheritance of Growth Habit, Seed Colour And Seed Shape In Four Varieties Of Vigna unguiculata (L) Walp

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ABSTRACT

The modes of inheritance of growth habit, seed colour and seed shape were studied in cowpea (Vigna unguiculata (L) Walp). Four accessions of Cowpea: A1 (TU 8462), A3 (TVU 122), B1 (TVU 3629) and IFE BROWN were morphologically characterized and hybridized in all possible combinations. Overall intraspecific crosses made between accessions in all possible (12) combinations yielded only six (6) F1 hybrids which is probably due to specific cross combinations, genetic divergence and environment. Characterization was carried out on the four Cowpea genotypes based on 27 qualitative and 17 quantitative traits. Variability was observed in 25 traits among which seven (7) traits are polymorphic, nine (9) are dimorphic and three (3) traits are monomorphic while quantitative traits were subjected to analysis of variance (ANOVA) test and their means were compared. The results showed that significant differences ($P \leq 0.05$) existed among the varieties tested. Although, the mode of inheritance was not determined at the long run, hybridization results confirmed a remarkable level of gene flow among the varieties. It also follows that the level of diversity observed in the accessions based on the morphological traits would be of much relevance in selecting parents for genetic studies and breeding programmes.

262

Development of Dollar to Naira Exchange Rate Prediction using Artificial Neural Network

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Abstract:

Due to the nonlinear and volatile nature of Foreign Exchange (FX) market, traditional econometric models frequently find it difficult to represent its intricate dynamics. In order to improve predicted accuracy, a cutting-edge machine learning approach, ANNs, was used. By employing ANN models to estimate the Dollar to Naira exchange rate, Simple Feedforward Neural Network algorithms with sequential model featuring volatility forecasting was deployed. Hence, this study investigates the development and evaluation of Dollar (USD) to Naira (NGN) exchange rate predictive model using Artificial Neural Networks (ANNs). A thorough framework approach that includes data collection, data preprocessing, ANN model architectural design, training, and evaluation, that provide a reliable forecasting framework has been presented for Nigerian financial market. The empirical research yields an 82.6% accuracy that show how well the Feedforward models capture the complex linkages found in the exchange rate data with important obstacles pinpointed and prospects in ANN-based currency rate prediction.

Keywords: Artificial Neural Networks (ANNs), Exchange Rate, Foreign Exchange (FX), Simple Feedforward Neural Network, Volatility.

437

Ethanol Extract of Ageratum conyzoides leaves ameliorated Some Erectile Dysfunction markers Caused by Paroxetine hydrochloride to Wistar Rats

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ABSTRACT

Erectile dysfunction (ED) is the consistent inability to attain or maintain penile erection sufficient for sexual satisfaction. This study investigated the effect of the ethanol extract of Ageratum conyzoides leaves (EEACL) on some markers of erectile function in paroxetine-induced erectile dysfunction in male Wistar rats. These markers include phosphodiesterase-5, nitric oxide, arginase, 3β and 17β hydroxysteroid dehydrogenases and testosterone. Twenty five of thirty rats were induced with paroxetine for 21days after which they were regrouped into five groups of five animals each and labelled and received: B (distilled water), C (4 mg/kg sildenafil citrate), D (15 mg/kg EEACL), E (30 mg/kg EEACL) and F (45 mg/kg EEACL) while group A (naïve control received distilled water) for seven days. On day eight, the rats were sacrificed using dichloromethane as anaesthesia. Blood was collected into plain bottles and the tissue of interest was excised and homogenized in ice-cold sucrose-tris buffer with mortar and pestle. The penile homogenate and serum were analyzed using standard methods. The results revealed that EEACL significantly ($P<0.05$) decreased the phosphodiesterase-5 and arginase activities in the penile of the male Wistar rats at 45 mg/kg body weight. Penile nitric oxide concentration was significantly ($P< 0.05$) reduced while 3β, 17β hydroxysteroid dehydrogenase activities and testosterone concentration increased significantly ($p>0.05$). The EEACL compared favourably with the modulatory activity of sildenafil citrate treated rats and naïve control indicating that EEACL may be effective in the reversal of erectile dysfunction especially at 45 mg/kg body weight in rats.

Key words: Ageratum conyzoides, atherogenic index, Phosphodiesterase-5, Nitric oxide, Testosterone

299

DEVELOPMENT OF ARTIFICIAL INTELLIGENT-BASED METAL DETECTION IN DRINKING WATER

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ABSTRACT:

Unhygienic Industrial activities and improper waste disposal by the local communal has been traced to the major cause of heavy metal deposits in environments and drinking water sources in Nigeria. However, this act poses threats to aquatic habitats and human health, through the contamination of the water sources. These have claimed lots of lives and aid spread of communicable diseases. Several techniques have been used in detecting metals but also come with the use of reagent which scientists have proven to be hazardous to health. Hence, it is pertinent to adopt the application of Artificial Intelligence to metal detection in drinking water sources leveraging on the embedded system technology. The proposed system development involves the design and simulation of an electronic circuitry using TinkerCad software. Through the Colpitt oscillator technique adapted, the system detects and analyzes frequencies emitted from surrounding metals and raises a real-time alarm indicating heavy metal presence. In conclusion, the ease of use and metal detection promptness of the developed AI-based metal detection system provide a long-lasting solution to the problem of water contamination.

Keywords: Arduino UNO, ATMEGA328P, Oscillation, RFID, Tank Circuit.

297

DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE-BASED MEDICINAL PLANT IDENTIFICATION SYSTEM

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ABSTRACT:

Nigeria has different varieties of medicinal plants useful for treatment of illnesses, however, majority of these plants still remain unknown to many Nigerians. While some known are not easily distinguished amidst varieties of different plants having the similar leafy structure. Hence, to proffer solution to these challenges, this project aims to develop an AI-based medicinal plant identification model using Deep Learning algorithms and Machine Vision techniques, enhancing efficiency and accuracy in identifying medicinal plant species for industries like pharmaceuticals, herbal medicine, agriculture, and biodiversity conservation. The methodology for the project involves collecting a Nigeria-based plant images datasets to train the Deep Learning algorithms effectively; this will enable the development of the detection model. The performance of the model will be checked through testing and validation procedures. The project has successfully developed the AI-based Medicinal Plant Identification model.

Keywords: Algorithm, Deep learning, Machine vision.

285

Determination of Geoelectric Layer using Vertical Electrical Sounding Data from Ilorin East South Western Nigeria.

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Abstract:

Geological and climatic factors affect the availability of water, a natural resource. It is necessary for human survival and the growth of any community because it depends on necessities like clean water, decent roads, energy, and businesses. Ilorin East's fast population growth has left residents without enough water sources, which emphasizes the need to investigate and make use of the region's groundwater resources. Water shortages have been a regular occurrence for the local communities, especially during the dry season.
The study area's subsurface geoelectric distribution was characterized through the use of Schlumberger array electrode configuration in two-dimensional (2D) electrical resistivity imaging. Nine VES stations in all, with current electrode spacing (AB/2) ranging from one to one hundred meters, were surveyed. Four unique geoelectric units were found during the investigation: The thickness of topsoil varies from 0.77 to 1.97 meters. Lateritic: thickness between 0.7 and 7.4 m. Weathered Basement: 1.19 to 27.9 meters of thickness,
Basement: Not specified in thickness. The sections on 2D resistivity imaging validated the results obtained from the VES data, indicating the existence of comparable geoelectric layers. Two distinct aquifers were also revealed by the inverted resistivity sections. With a maximum depth of about 7 meters, the shallower aquifer is described as a low-yield aquifer made up of units of clayey sand and sandy clay. Understanding the subsurface characteristics is essential for groundwater management and exploration, and this thorough geoelectric characterization can help.

Key words: Geoelectric layers, Electrode spacing, Shallower Aquifer, Sub-surface

328

Ai for Post-Pandemic Assessment of Covid-19 Vaccination Uptake in Kwara State

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ABSTRACT:

Vaccination is aimed at averting the spread of COVID-19, but complications like vaccine hesitancy and resistance continue to arise, particularly in low-middle-income countries (LMIC) like Nigeria. This study examines factors contributing to vaccine hesitancy and the effectiveness of various communication strategies intended to promote vaccination. Through questionnaires distributed across four institutions in Kwara state, 400 participants were recruited. Most of the responded were between age 26-40 years where 94.1% were student, thus emphasizes the focus of the study on the student population. A smaller proportion consists of lecturers(3.6%) and non-teaching staff(2.4%). Female accounted for 56.8% while male had 43.2% of population, indicating a relatively balanced

gender representation within the study. The survey showed that only 46.2% received the COVID-19 vaccine while 48.2% received up to second dose. Only 11.5% of participants had been fully immunized (AstraZeneca, Moderna, Pfizer-BioNTech, Johnson and Johnson). The most recurrent factor affecting the uptake of Covid-19 vaccine among vaccine recipients were Friends and families, Social media, Personal decision. Predictive model through Artificial intelligence is a novel tool that can assist health professionals and policymakers in developing effective ways to boost vaccine uptake and achieve herd immunity.

Keywords: Artificial intelligence, COVID-19, Post-pandemic Assessment, Selected Universities, Kwara state.

42

The 2024 Food Price Crises in Minna: Re-Thinking Food Security Policies

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Abstract

This paper examines the 2024 food price crises in Minna, identifying long and short term causes as well as two factors which distinguish the 2024 food price increases from earlier episodes of diversion of food crops during COVID 19. The paper contends that while most attention has been on agricultural production and increases demand from neighboring states. It then explores the impact of several factors including systemic decline in investment in agricultural productivity and technological advancement. Primary and secondary data were used in generating relevant data. The primary data was source with the aid of a questionnaire while the secondary data were obtained through the library documented materials such as journals, text books, magazines and on-line resources. The sample size of 381 respondents was taken based on Krejie and Morgan (1970) sample table. The sample technique adopted was stratified and simple random sampling technique. The paper used simple table, percentage, frequency table and logistic regression in the analysis of data for study. Cronbach alpha reliability test was performed and the results shows that the measurement reached high reliability coefficient of 0.84 and study revealed that food insecurity in 2024 was cause as a result of removal of subsidy, differences in exchange rate and attitude of business men which causes artificial scarcity and inflation in the country. Based on that, the article recommended improving program me and policies that ensure proper management of food, farmers should be encouraged to produce more farm produce and government should create an enable environment for them. with legislation to fight against hiding of food in the stores.

Keywords:

304

Enhancing Efficiency of Accounting Information System and Non-Financial Performance in the Agro- Allied Companies in Nigeria using Artificial intelligence

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ABSTRACT:

The study aims to explore the ways in which agro-allied enterprises operating in Nigeria might improve their non-financial performance and optimize their accounting information systems via the use of artificial intelligence. Assessing how AI technologies can be incorporated into these businesses' accounting systems to improve efficiency, boost accuracy, and offer insightful information for decision-making is part of the study's purview. This study will be of great importance to various researchers, youths, students at all levels and future accountants, as it will provide accountants with a blue print of how artificial intelligence enhance efficiency of accounting information system, and how Artificial Intelligence tools could be explored for ease of accounting practices.The analysis of related literature reveals that although the results indicate a favorable correlation between AIS and business performance, this study was extended to include more AIS components that were missed by others. Simple random sampling procedures are the sampling approach to be used in this study to ensure a systematic selection of the sample for analysis. There were 45 people in the population, therefore a basic random selection of 10 sample sizes from the listed agro-allied enterprises in Offa LGA, Kwara state, will be used. To gather data from the selected firms for this study, respondents will be given a Likert scale questionnaire with values of (SA=5; A=4; UD=3; D=2; SD=1).

298

VISUALIZATION OF NIGERIA POPULATION USING DATA ANALYSIS TOOLS

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ABSTRACT:

The rapid growth and complexity of Nigeria population pose different challenges for policy makers, researchers and other organization seeking to understand the various socio-economic issues. Visualization of Nigeria population using data analysis tools involve collection and contextually analysis datasets from a reliable source either census data or demographic surveys. This project embarks on a thorough visual representation of Nigeria's census population since the year 2006. This project adopts the use of Pie and Column Charts for the visual representation of Four years (2010, 2021, 2022 and 2023) population. The column chart compares the population growth rates of different areas of Nigeria during a certain time period, while the pie chart shows proportions across different regions of Nigeria. In conclusion, the visualization aid the ease analyzing the Nigeria population rate since 2010 and deduce facts necessary for research.

Keywords: Algorithm, Census, Column chart, Ethnics Groups, Pie chat, Satellite Imagery

313

Effect of Dust on the Performance of Photovoltaic Panels

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Abstract:

The efficiency and output of photovoltaic (PV) panels are crucial factors in maximizing the utilization of solar energy. However, environmental factors such as dust deposition on PV panels can significantly impact their performance. Dust particles act as a barrier, attenuating sunlight and creating shading effects that impede the optimal functioning of the solar cells. Additionally, the chemical composition of dust, including pollutants and contaminants, can exacerbate the degradation of PV panel materials, affecting long-term performance. In this work we employed field studies and laboratory simulations, to quantify the impact of dust on PV panel performance. The available equipment used are photovoltaic panel, ammeter, voltmeter, dust, and connecting wires. Additionally, innovative cleaning techniques and surface coatings have been proposed as potential solutions to mitigate the negative effects of dust accumulation. This dynamic interactions between dust and PV panels under diverse environmental conditions should be further researched on to deepen our understanding. As the world increasingly relies on solar energy, comprehending and addressing the challenges posed by dust accumulation becomes paramount for the sustainable and efficient operation of photovoltaic systems.

Keywords: Dust, efficiency, energy conversion, shading effect, solar cells,.

53

Use of Indigenous Climate Change Adaptation Strategies among Livestock Farmers in Kwara State, Nigeria

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Abstract

Rural livestock farmers may not have to invent new methods or practices to respond to climate change, but rather modify their indigenous practices to address the phenomena. This paper, therefore, examined the use of indigenous climate change adaptation strategies among livestock farmers in Kwara State, Nigeria. The research specifically looked at socioeconomic characteristics of respondents, evaluate the farmers' knowledge levels indigenous climate change adaptation strategies and identify the factors that influence the use of indigenous climate change adaptation strategies. A two-stage sampling technique was used to select one hundred and forty respondents (140) for the study. The data were analyzed with descriptive statistics and multiple regression. Results showed that the mean age of the livestock farmers was 44.2 years,8.5years of formal education, and an average household size of seven persons. The mean income earned was N29,830.20 per month. Knowledge level of respondents was moderate with a mean score of 9.17. Provision of shade and water to reduce stress, identifying and strengthening local breeds that have adapted to local climatic stress and introducing integrated livestock farming system were major indigenous strategies used by livestock farmers. The results further revealed that the significant factors influencing the use of these adaptation strategies in the study area were age, years of formal education, years of livestock experience and income realized. Therefore, measures that will increase the knowledge of livestock farmers on climate adaptation strategies should be put in place so as to boost enhance and sustain food security.

Key words:

12

Examining The Contributions Of Agripreneurship Initiatives In Addressing Youth Unemployment In Nigeria: An Assessment

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Abstract

Addressing the pervasive issue of youth unemployment in Nigeria necessitates innovative approaches, among which the resurgence of agricultural entrepreneurship stands out.This study explores how agripreneurship initiatives contribute to economic development and social well-being by mitigating unemployment in Nigeria.The study adopts a case study method to provide detailed examples of successful agripreneurship initiatives and their impact on youth unemployment. By examining case studies of different agripreneurship initiatives, the study offers insights into the current state of unemployment in Nigeria and the potential of agripreneurship to address this challenge.While the findings highlight the positive impact of agripreneurship programs, the study acknowledges several challenges that must be addressed. These include limited access to finance, infrastructure constraints, and market dynamics.Ultimately, the study proposes a comprehensive framework for combating youth unemployment in Nigeria's agricultural sector.Policy recommendations include increasing access to finance for aspiring agripreneurs, improving rural infrastructure to support agricultural activities, and fostering the market linkages for agricultural products.

Keywords:Agricultural; Agripreneurship; Initiatives; Nigeria; Youth Unemployment

426

ACHIEVING GOOD GOVERNANCE FOR SECURITY MANAGEMENT, HEALTH AND SAFETY EDUCATION TOWARDS SUSTAINABLE GLOBAL ECONOMY

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Abstract

This paper explores the intricate relationship between good governance and the promotion of sustainability in the global economy. Good governance, characterized by transparency, accountability, participation, and the rule of law, serves as the foundation for achieving the United Nations' Sustainable Development Goals (SDGs) and addressing the complex challenges facing the world. The paper begins by examining the role of governance in advancing the SDGs, emphasizing its significance in setting policies, mobilizing resources, and fostering collaboration among governments, civil society,

and businesses. Case studies from Denmark, Bhutan, and the European Union illustrate how effective governance can drive sustainability at various scales. Furthermore, the paper delves into the intersection of security management, health, safety education and good governance, highlighting collaborative governance approaches to address common risks and vulnerabilities. These intersections emphasize the interdependence of security, public health, and sustainability. In conclusion, the paper underscores the critical role of good governance in promoting sustainability and offers recommendations for strengthening multilateral cooperation, enhancing transparency, fostering inclusivity, and supporting research and innovation. By embracing these recommendations, nations and communities can pave way for a more sustainable and inclusive global economy, where prosperity and well-being flourish for all.
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Keywords: Good governance, Sustainability, Security management, Safety education, Global economy

413

Rural Banditry and Food insecurity in Nigeria

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Abstract
The prevalent and increasing activities of the bandits on the rural communities especially the farmers in the North West has posed a threat to the growth and development. It has become a threat to food production, livestock production and security. This menace has become worrisome in almost all the states in the North West of Nigeria.it therefore need concerted efforts of the stake holders such as the government, the community, religious leaders and infact the NGO. The paper is anchored on the theory of frustration and Aggression theory of crime for it theoretical frame work. This paper adopted content analysis for it research design. It examined some papers such Punch, Champion Newspaper, The sun and the Guardian. It was found that invasion of farm land by banditry created scarcity of agricultural products and kidnaping of farmers which made the farmers to dessert the land and cultivation of food product. More importantly, the paper made useful recommendations that would help to curb the activities of bandits such the farmers should be compensated financially for the destruction of their farms and livestock and the political leaders should wake up to their responsibility of providing social amenities and employment.

Keywords: Banditry, Food insecurity, Pasture, Farming, Rural area, Nigeria

205

Optimizing Microbial Oil Production from Oleaginous Filamentous Fungi using Agricultural Biomasses as Alternative Low-Cost Carbon Source for Biodiesel Production

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Abstract

Microbial lipids, also known as single cell oils (SCOs), are produced by oleaginous microorganisms such as algae, filamentous fungi and yeasts. They are promising candidates for biodiesel production because their oil properties are like vegetable oils. SCOs, do not require huge space and can be produced in a much shorter time than vegetable oils. The versatility of microbial lipids has prompted the quest for a cost-effective production which may be attained via the use of readily available low cost agrowaste substrates and Nano-supplementation. Therefore, this study was conceptualized to extend the frontiers for production of microbial lipid using readily available low-cost agro wastes and implementation of novel strategy of Nanosuplementation of growth medium to stimulate production of the lipid.
Soil samples will be collected from oil palm plantation sites; Irra and Iregba villages, screened for oleaginous microorganisms on Congo agar plates. Isolates with the maximum lipolysis zone size will be characterized and identified at molecular level. The isolates will be used to valorize sweet potato peel, corn cob, empty oil palm fruit fibers, and rice bran in submerged fermentation to produce intracellular lipid, which will be optimized using Taguchi technique and nano supplementation with silver, gold and zinc oxide nanoparticles. The produced lipid will be purified, characterized, and evaluated for various biotechnological applications such as biodiesel production and waste water treatment. The biodiesel produced will be evaluated using the GS-MS Chromatograph for efficacy against fossil diesel. It is expected at the end this research the biodiesel produced should be able to prevent increase in green house emission due to its low carbon emission, mitigate climate change, promote clean air, and support agricultural productivity through circular economy.

Keywords: Microbial oil, oleaginous fungi ,Agro wastes and biodiesel

72

Relationship Between Business Incubation and Entrepreneurship Development in Lagos Island Local Government

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Abstract

Business incubation refers to the process of supporting the establishment and growth of new businesses, often through the provision of resources, guidance, and networking opportunities. This study examined the relationship between business incubation (BI) and entrepreneurship development in Lagos Island Local Government. Therefore, the objective of the study is to ascertain the relationship between mentoring programs and entrepreneurship development, and to give a slight view on the types of business accelerators in Nigeria and their impact on the economy. A face-to face interview was conducted, in which in-depth details were collected from 100 beneficiaries on Lagos Island. The result indicates that mentoring, coaching, and networking rendered by business incubators cannot be underestimated, it supports the development of successful businesses. It was concluded that business incubation programs are a valuable resource for entrepreneurship development and for businesses aiming to get to the next level. Therefore, it is recommended that the services rendered by the government and individuals as business incubators be provided to a greater extent, as this will not only have an effect on entrepreneurship development but also on economic growth as it will increase job opportunities in the present situation.

Keywords; Business Incubation, Entrepreneurship Development, Mentoring, Networking

300

Deduction of Groundwater Potential from Geo-Electric Data in Sardauna Memorial College Kaduna, North-Western Nigeria

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ABSTRACT:

Vertical Electrical Sounding (VES) employing the Schlumberger Electrode configuration was used to acquire data within the study area. The processed data will provide information about the subsurface lithology with the aim of evaluating its groundwater potential. A total of 25 VES data ware made along the five profiles with five sounding stations per each profile within an area of about 10000m2. The results of the interpretation of the VES data were used to produce the coefficient of reflection and longitudinal conductance maps, which are critical parameters for Groundwater potential. The VES curves were interpreted using ipi2win resistivity computer software and the iso-maps of the coefficient of reflection and longitudinal conductance ware produced using surfer11 software. The analysis of the data revealed that the survey area is dominated by a maximum of four layers, namely; top soil, weathered basement, fracture basement and fresh basement. The result of the interpreted VES data showed that the excellent part of the water bearing zone (aquifer) was found to be located around the south-west of the study area because of the positive correlation between the two maps produced.

KEY WORDS: Aquifer, Geo-electric, co-efficient of reflection, and longitudinal conductance.

188

Assessing The Efficacy Of Phytochemical Constituents Of Carica Papaya Leaves On Isoproterenol-Induced Myocardial Infarction On Female Wistar Rats

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Abstract:
TThe prevalence of cardiovascular diseases has been rising globally, causing high death rate only after cancer. Myocardial Infarction (MI) is a CDVs disease condition of the heart tissue resulting from the obstruction of blood supply to the heart muscles. Medicinal plants present alternative therapeutic, cheaper with less side effects over synthetic drugs in the treatment and prevention of MI. The present study analyzed the phytochemical constituents of hydroethanolic extract of Carica Papaya leaves extract (CPE) and assessed the efficacy of CPE in protecting the heart from Isoproterenol (ISP) induced MI in female rats. Through GC-MS analysis of the CPE and integrated library search, nineteen bioactive compounds; alkaloids, phenolics, flavonoids and also, amino acids were identified. The effects of treatment with 0.5 ml of various concentrations (100, 200, and 400 mg/kg) of CPE on body weight changes, serum marker enzymes such as aspartate transaminase (AST), alanine transaminase (ALT), lactate dehydrogenase (LDH) and troponin I; tissue antioxidant enzymes such as catalase (CAT) and superoxide dismutase (SOD) were studied during the 15 days experimental period. ISP-induced rats showed no significant (P>0.05) effect on the body weight but increased

significantly (P<0.05) Troponin I, AST, ALT and LDH while reducing significantly (P<0.05) CAT and SOD levels. Pretreatment with doses of CPE significantly (P<0.05) extenuated the elevated levels of Troponin I, LDH, AST as well as ALT while restoring towards normal the activities of CAT and SOD. This work contributes to the conclusion that, when administered to animals with MI, CPE exhibit cardio-protective effects.
Keywords: Myocardial infarction, Carica papaya, Isoproterenol, Phytochemicals, Cardiac biomarkers.

211

Effects of Trigonellafoenum-Graecumseeds Supplemented Diet on Heamatology and Liver Function Indices of Protein-Energy Malnourished Rats

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ABSTRACT

Protein-Energy Malnutrition (PEM) is most prevalent in low and middle income countrieswere 45% of child deaths were attributed to under-nutrition. Trigonellafoenum-graecum(fenugreek) is a plant of Fabaceae family whose seed is known for its important phytochemicals and medicinal purposes. This study was aimed at evaluating the ameliorative potentials of Trigonellafoenum-graecum seeds supplemented diet onheamatologicaland toxicological parameters of protein-energy malnourished rats.Sixty-three (63) female albino rats weighing between 50 and 70g were randomly grouped into treatment groups of ten (10) animals each. Group 1 was the controlwhile all others were malnourished with low protein (4%) iso-caloric diet for four weeks thereafter, randomly grouped into group 2 fed with standard commercial feed, Groups 3, 4 and 5 fed with 25g/kg, 50g/kg and 100g/kg fenugreek seeds supplemented diets respectively for 4 weeks and Group 6 was untreated.There was significant ($p^<0.05$) reduction in all heamatological parameters of malnourished untreated rats whereas, all treated groups were significant ($p^<0.05$) increaseafter treatment with fenugreek supplemented diets. Moreover, the significant ($p^<0.05$) increase in Alanine transaminase (ALT), aspartate aminotransferase (AST) and alkaline phosphatase (ALP) observed in the serum of untreated rats were significantly ($p^<0.05$) reduced in all the treatment groups after treatment. Hence, fenugreek supplemented diets improves heamatological parameters of malnourished rats and it is not toxic to the liver.

Keywords: Fenugreek, Protein-energy Malnutrition, Iso-caloric, Supplement, Diets

310

Synthesis and Characterization of Oxide Nanostructured thin Films for Smart Energy Harvesting and Optoelectronic Applications

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Abstract:

The escalating demand for clean energy, propelled by rapid economic growth and population expansion,
underscores the imperative of transitioning to sustainable and environmentally friendly energy sources. Among
these sources, abundant solar energy harnessed via nanostructured thin film technologies holds significant promise.
Efficient utilization of oxide nanostructured thin films is paramount for advancing smart energy harvesting and
optoelectronic applications. These films, characterized by their unique properties, offer vast potential for
revolutionizing energy storage systems, solar cells, sensors, and other optoelectronic devices. This research aims to
synthesize and characterize oxide nanostructured thin films to unlock their full potential in smart energy harvesting
and optoelectronic applications. Delving into various synthesis techniques and material compositions, the study
seeks to optimize film properties for enhanced performance and functionality. Advanced characterization methods,
including scanning electron microscopy (SEM), X-ray diffraction (XRD), and X-ray photoelectron spectroscopy
(XPS), will comprehensively evaluate the structural, optical, and electrical properties of the films. Furthermore, the
research will explore the electrical, optical, and optoelectronic behaviors of the films to assess their suitability for
real-world applications. By addressing existing challenges and optimizing film parameters, this research endeavors
to provide valuable insights into the synthesis and characterization of oxide nanostructured thin films. Ultimately,
this endeavor aims to foster innovation in smart energy harvesting and optoelectronic technologies on a global scale,
driving forward the transition towards sustainable energy solutions.

Keywords: Synthesis, Characterization, Oxide Nanostructured Thin Films, Smart Energy Harvesting,
Optoelectronic Applications, Sustainable Energy, Solar Energy, Nanotechnology, Material Optimization,
Advanced Characterization Techniques

173

Proposition Of Dearth form to Agriculture in Birnin Gwari Area of Kaduna State, Nigeria

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Abstract

The Propositions of Dearth form to agriculture has become contemporary issues and called for urgent remedy. The paper used secondary data to analyze it results. The characteristics of rainfall and temperature were analysed using measures of central tendency, dispersion, coefficient of variance and distribution. The results revealed that the rainfall had a mean of about 3.27mm with variance of 83.59 and standard deviation of 9.14. The maximum temperature (Tmax) had a mean of 31.98℃ with the Variance of 10.28 and standard deviation of 3.31. The minimum temperature had a mean of 19.37℃ with the variance of 9.26 and standard deviation of 3.04. More so, the analysis showed that rainfall had a high variability (CV of 0.989 (99%)) while the minimum temperature had a moderate variability (CV of 0.10 (10%)). Also, the maximum temperature had a low variability (CV of 0.16 (16%)). Analysis of inter decadal variation of SPEI showed that 1994-2003 had the lowest value of SPEI in the 3 month, 6–months, 12 months and 24 months SPEI time series. The decade 2004-2013 had the highest value of SPEI in the 3 month, 6–months, 12 months and 24 months SPEI time series. The 2014-2023 decadal values range from 0.05 to 0.15 in the four time scale series. Though the Dearth situation in the study area is on the better side, but Dearth as a natural occurrence should not be taken lightly as a reoccurrence can be disastrous without any proactive measures in place to reduce the impact as climate change is no longer illusive but very real. The paper finally recommended the need for Agricultural extension to educate and provide modern techniques on new farming method to the farmers in other to curb Dearth epidemic

Keywords: Propositions, Dearth, Form, Agriculture, and SPEI

429

ANALYSIS OF THE KEY CHALLENGES FACING SMALL-SCALE START-UPS IN THE ILORIN METROPOLIS: ITS PROSPECTS

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Abstract

The burgeoning landscape of small-scale start-ups in the Ilorin Metropolis is a vibrant testament to entrepreneurial zeal amidst a challenging socio-economic backdrop. This study meticulously examines the primary challenges that small-scale start-ups encounter within this locale, juxtaposing these hurdles with potential avenues for growth and sustainability. Key impediments identified include inadequate access to finance, limited infrastructure, and the paucity of technical expertise, all of which collectively stymie business proliferation. Furthermore, regulatory bottlenecks and market entry barriers exacerbate the operational difficulties faced by nascent enterprises. Despite these formidable obstacles, the study highlights numerous prospects that could be harnessed to foster entrepreneurial success. These include leveraging digital platforms for broader market reach, tapping into local networks for collaborative growth, and the strategic exploitation of niche markets. Additionally, government initiatives and private sector interventions aimed at enhancing financial inclusivity and infrastructure development are pivotal in catalyzing the growth of small-scale enterprises. By delineating these challenges and prospects, this analysis provides a comprehensive roadmap for stakeholders aiming to bolster the entrepreneurial ecosystem in the Ilorin Metropolis, thereby contributing to economic development and job creation.

Keywords: Small-scale, Socio-economic, Entrepreneur, Sustainability, Ilorin-Metropolis.

31

Digital Transformation For Sustainable Impact: Bridging University-Industry Collaboration In Nigeria

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Abstract

Digital transformation holds immense potential for sustainable impact in Nigeria, with university-industry collaboration emerging as a pivotal force in driving this transformative agenda. This paper explores the multifaceted dimensions of digital transformation, starting with an insightful overview of the current state of digital transformation in Nigeria. It examines key indicators such as internet penetration rates, mobile phone adoption, and government initiatives aimed at promoting digital innovation. Challenges and opportunities for sustainable development are then identified, elucidating how digital transformation can address socio-economic and environmental challenges facing the nation. The role of universities in driving digital transformation is explored, emphasizing their pivotal role as centers of research, innovation, and human capital development. Concurrently, the engagement of industries in digital transformation initiatives is scrutinized, highlighting how they can contribute resources, expertise, and real-world problems to collaborative efforts with universities. Case studies of successful university-industry collaborations are presented, showcasing tangible sustainable impacts resulting from such partnerships. Furthermore, the paper examine specific domains where digital technologies are driving sustainable development, including digital technologies for sustainable agriculture, digital health solutions for improved healthcare, and digital innovation in education. The significance of an enabling policy and regulatory framework for digital transformation is analyzed, alongside the crucial importance of capacity building and skills development in equipping the Nigerian workforce with the digital skills essential for participation in the digital economy. All in all, this paper elucidates the synergistic potential of university-industry collaboration in fostering digital transformation for sustainable impact in Nigeria.

Keywords:

54

Energy poverty in Nigeria: What is the Implication for farming households' welfare?

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Abstract

Energy must be affordable and clean for everyone to achieve sustainable development. Energy poverty is a household's inability to get social and economic access to the required energy at home. However, the energy poverty implications for farming households' welfare in terms of expenditure remain unexplored in the literature. This study estimates the incidence of energy poverty, and examines the welfare impacts of energy poverty among farming households in Nigeria. The study used Living Standard Measurement Study (LSMS) data collected in 2015/2016 and 2018/2019 waves nationwide by the National Bureau of Statistics (NBS), Nigeria. We used the Multidimensional Energy Poverty Index (MEPI), Ordinary Least Square (OLS) regression model and quantile regression (QR). Energy poverty negatively impacts household welfare; it negatively affects households at the

bottom of first, second and third quantile expenditure distributions. Policymakers must recognise households with inadequate energy consumption to satisfy their fundamental needs and improve their general welfare; after identifying them, proper energy strategy must aim at assisting them in having an adequate energy supply. The policy needs to incorporate off-grid energy sources to make energy more accessible.

404

EFFECT OF POVERTY ON NIGERIA VOTERS BEHAVIOR

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Abstract
The pervasive issue of poverty significantly influences voter behavior in Nigeria, shaping electoral outcomes and the broader political landscape. This study examines the complex relationship between socioeconomic deprivation and democratic participation, highlighting how poverty impacts political attitudes, electoral preferences, and civic engagement among Nigerian voters. Poverty manifests in limited access to basic necessities, inadequate education, and minimal economic opportunities, which collectively constrain the ability of citizens to make informed choices and actively participate in the electoral process. The analysis reveals that poverty drives vote buying and selling, reduces voter turnout, and increases voter susceptibility to manipulation and coercion. Additionally, the lack of access to reliable information exacerbates these challenges, further undermining electoral integrity and trust in democratic institutions.
To address these issues, the study proposes several recommendations: implementing economic empowerment policies, enforcing anti-corruption measures, enhancing voter education, expanding access to unbiased information, improving voting logistics, promoting civic engagement, and reforming electoral laws. These strategies aim to mitigate the adverse effects of poverty on voter behavior, fostering a more equitable and participatory democratic system in Nigeria. By tackling the root causes of poverty and enhancing the integrity of the electoral process, Nigeria can ensure that all citizens, irrespective of socioeconomic status, are able to exercise their democratic rights effectively.
Key words: Election, Poverty and Democracy

177

Effects of Extraction Variables on Selected Anti-Nutrients of Cashew Nut Milk: A Response Surface Approach

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Abstract

In this study, central composite design of response surface methodology was adopted to study the effects of extraction time, extraction temperature and cashew nut to water ratio on selected anti-nutrients of cashew nut milk with the view of optimizing extraction conditions that produces minimal levels of anti-nutrients. Standard methods of analysis on anti-nutritional factors were adopted for raw cashew nut and cashew nut milk. Results showed that tannin, alkaloid, saponin, phenol, flavonoid and phytate contents of raw cashew nut were 53.43, 49.02, 63.79, 86.88, 42.16 and 186.59 mg respectively. Values of tannin, alkaloid, saponin, phenol, flavonoid and phytate of cashew nut milk under different extraction conditions ranged from 9.52-11.19 mg/mL, 10.23-12.71 mg/mL, 30.00-30.90 mg/mL, 0.22-0.88 mg/mL, 19.86-27.38 mg/mL and 71.89-102.37 mg/mL respectively. Analysis of variance showed that extraction time, extraction temperature and cashew nut to water ratio had significant ($p < 0.05$) effects on anti-nutrients of cashew nut milk. Optimum extraction variables were estimated at 13 min of extraction time, 60 oC of extraction temperature using ratio 2 of cashew nut to water. Minimal estimated amount of tannin, alkaloid, saponin, phenol, flavonoid and phytate were 10.53 mg/L, 11.61 mg/L, 33.99 mg/L, 0.31 mg/L, 22.67 mg/L and 96.93 mg/L respectively.

Keywords: anti-nutrients, cashew nut milk, central composite design, extraction time, extraction temperature, cashew nut to water ratio

207

SINGLE CELL PROTEIN, A SUSTAINABLE PROTEIN SOURCE FOR THE MALNOURISHED WORLD

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Abstract:

Proteins are essential nutrients that play a vital role in human health and development. The global demand for proteins is increasing due to population growth and changing dietary patterns, particularly in developing countries. However, malnutrition, particularly protein-energy malnutrition (PEM), remains a significant issue worldwide. In developing countries, PEM is often caused by a lack of access to nutrient-dense foods such as meat, fish, and dairy products. PEM continues to be a major public health problem in the developing world, particularly in southern Asia and sub-Saharan Africa. Diets are frequently deficient in macronutrients (protein, carbohydrates, and fat, leading to protein-energy malnutrition), micronutrients (electrolytes, minerals, and vitamins, leading to specific micronutrient deficiencies), or both.

The growing global need for protein-rich foods has prompted the development of alternative protein sources to supplement the existing sources. One of the most crucial stages toward this aim is single-cell protein (SCP), which is an alternative and novel technique for successfully solving the global food problem. Single-cell proteins are isolated from the cells of microorganisms with high protein content, such as dried cells and purified proteins. Single-cell proteins are a promising solution to global protein deficiency challenges in food security and nutrition.

This review provides insights into the sources of SCPs, their industrial production procedures, and their applications.

Keywords: Single cell protein, malnutrition, sub-Saharan Africa and global demand

265

Compounds from for the Leaves of Adansonia digitata Exhibited In Vitro Albumin Denaturation and Cytotoxicity on Mammalian Cells

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Abstract:

Currently, most available anti-inflammatory drugs, such as NSAIDs, are either unaffordable or associated with undesired adverse effects. Hence, the imperativeness for the search for new anti-inflammatory drugs with promising pharmacological potential and reduced toxicity. The leave extracts of Adansonia digitata L., of the family Malveceae, a multi-medicinal plant was subjected to serial column chromatography to afford bioactive principles which were subjected to in vitro antioxidant, anti-inflammatory and cytotoxicity evaluations on mammalian cells, human foreskin fibroblast HFF cells. The hexane extract afforded thirteen isolated compounds while the ethyl acetate afforded 7 purified compounds. The structures of the isolated compounds were determined using a combination of spectral data obtained from UV-visible, Fourier Transformed Infra-red, FT-IR and proton nuclear magnetic resonance, H-NMR spectroscopies. The results of the in vitro anti-inflammatory evaluations (membrane stabilization and albumin denaturation assays) revealed that the crude extracts have significant activities comparable to the standard, indomethacin. On the HFF cells, the isolated compounds exhibited cytotoxicity had IC50 ranging 1.2 to 4.8 µg/mL. The findings affirm that baobab leaves contains numerous triterpenes of therapeutic relevance. The study adds credence to the application of the plant in folkloric medicine.

Keywords: Adansonia digitata, Anti-inflammatory, Albumin Denaturation, Membrane Stabilization

267

DOES PARTICIPATION IN NON-FARM EMPLOYMENT INFLUENCE POVERTY STATUS OF RURAL FARM HOUSEHOLDS IN NIGERIA?

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Abstract:

Nigeria is the most populous nation in sub- Sahara Africa and it houses the largest number of poor persons.
This study focuses on the influence of participation in non-farm employment on rural household poverty in

Nigeria.
The study employed the 2018/2019 Nigeria General Household Survey panel data collected by the National
Bureau of Statistics in collaboration with the World Bank. The study used data collected during postharvesting season because most of the information needed for this study were not available in the postplanting season data set. Data on 4570 rural households were analysed with descriptive statistics, Foster,
Greer and Thorbecke (FGT), (1984) poverty indices and Probit regression at 0.05 level of significance. The analysis shows a majority (73%) participated in non-farm employment, while the poverty incidence
stood at about 52% among the rural households in Nigeria. The incidence of poverty was lower (37.4%)
among the participants in non-farm employment than their non-participating counterparts (63.2%). The
analysis further shows that participation in some type of non-farm employment had reducing effects on
poverty.
The study shows that participation in non-farm employment by rural farmers is capable of alleviating
poverty in rural Nigeria. Hence, policies targeted at encouraging participation of farmers in non-farm
employment will go a long way in improving the standard of living of rural dwellers for Nigeria to achieve
the sustainable development goal- 1 on eradication of poverty everywhere in all its forms.
Keywords: Non-farm employment, rural households, farmers, Nigeria

270

Artificial Intelligence Prediction of in Vitro Antioxidant and Anti-Malarial Activities of Aqueous Extract of Euphorbia heterophylla

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Abstract:

Euphorbia heterophylla, a plant with traditional medicinal uses, has been reported to possess antioxidant and anti-malarial properties. However, the in vitro activities of its aqueous extract have not been fully explored. This study employed artificial intelligence (AI) techniques to predict the in vitro antioxidant and anti-malarial activities of the aqueous extract of E. heterophylla. Using a machine learning algorithm, we analyzed the phytochemical composition and molecular descriptors of the extract and predicted its antioxidant activity (DPPH radical scavenging assay) and anti-malarial activity (P. falciparum growth inhibition assay). Our AI model predicted a high antioxidant activity (IC50 = 3.45 µg/mL) and moderate anti-malarial activity (IC50 = 12.6 µg/mL) of the aqueous extract. The predicted results were validated through in vitro experiments, which confirmed the high antioxidant activity (IC50 = 3.52 µg/mL) and moderate anti-malarial activity (IC50 = 13.4 µg/mL) of the extract. Our findings demonstrate the potential of AI in predicting the biological activities of plant extracts, accelerating the discovery of natural products with therapeutic potential.

Keywords: Artificial Intelligence, Euphorbia heterophylla, Antioxidant activity, Anti-malarial activity, Machine learning, In vitro prediction.

272

Artificial Intelligence-based Model for Solar Energy Resources

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Abstract:

Energy is as important as life itself and no-thing would ensue without energy. Solar energy is chief among other forms of energy and its potential in sustaining life and other activities on Earth cannot be underrated. Solar energy is manageable through photosynthesis, photovoltaic technology and solar thermal systems. However, for maximum throughput, effective designs, sizing, calibration, manufacture or deployment of any solar application, the precise amount of impinging solar radiation per unit surface area is a requisite. The amount of the Global Solar Radiation (GSR) can be determined through direct and indirect means. GSR data obtained through the direct means is said to be more precise but scarce. On the other hand, GSR data obtained through the indirect means is available for any location of interest, but its level of precision is often doubtful. Hence, the pressing need to develop a GSR model to address the issue of data scarcity, erroneous estimations and the intricacy of existing models that attempt to predict GSR. On this note, an artificial intelligence-based GSR model is developed and has been evaluated using statistical metrics. It is adjudged good for its performances over Australia, Brazil, Cameroon, Egypt, Ghana. India, Malaysia, Nigeria, South Africa and Togo.

Keywords: Artificial Intelligence, Artificial Neural Network, Global Solar Radiation, Renewable Energy, Solar Energy.

281

Exploring Funding Mechanisms to Enhance Research Output Commercialization

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Abstract:

By converting academic information into useful applications, the commercialization of research outputs is essential for promoting economic progress and societal advancement. However, Nigerian tertiary institutions have absence of financial support as a prominent factor. Analysis of pertinent research and professional viewpoints shows that expanding financing sources and encouraging cooperation are crucial tactics in addressing this problem.
The report, which draws on scholarly findings, promotes a multimodal strategy that gives institutional capacity building and Public-Private Partnerships (PPP) priority. Universities can successfully

commercialize research discoveries by utilizing PPP agreements to gain access to extra resources and industrial experience. Technology transfer, commercialization, and collaborative research projects all benefit greatly from strong partnerships between academic institutions and private businesses. Additionally, improving research capabilities and competitiveness in obtaining outside financing requires expenditures in infrastructure, staff training, and research facilities, the introduction of revenue-generating strategies that extend beyond tuition fees, like revenue streams from commercialization operations, might furnish a steady financial basis for research initiatives.
Optimal resource allocation, encouraging teamwork, and adopting creative funding models, Nigerian postsecondary institutions will enhance innovative culture and propel long-term success in the knowledge economy in the country. There is a need for stakeholders to take joint action and demonstrate a strong commitment to addressing the financial challenges detailed in this study.

Keywords: Commercialization, Research outputs, Funding mechanisms, Nigerian tertiary institutions, Public-private partnerships (PPP),

282

Harnessing Farm Waste for Sustainable Energy: A Solution for Rural Communities

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Abstract:

The use of fossil fuels for energy production has inflicts detrimental effects on the environment right from the stage of extraction through to the combustion. These activities release greenhouse gases and pollutants into the atmosphere, contributing to climate change, air pollution, and ecosystem degradation. Given the associated challenges of depletion and environmental harm, there is an imperative to transition to greener, renewable, and sustainable energy sources. In the pursuit of renewable energy sources, agricultural waste is emerging as a promising resource due to its affordability and abundance, especially in contrast to depleting fossil fuels and growing environmental concerns. This generated wastes rather than constituting environmental pollution can be converted to value added products in rural communities. In a developing economy like Nigeria, this solution can help mitigate challenges such as inadequate energy, improper waste management, and climate change. Farm wastes including crop residues, animal manure, and agricultural by-products, represent significant biomass resources that can be harnessed to produce renewable energy through various conversion technologies such as anaerobic digestion, biomass combustion, and biofuel production. This study reviews the use of farm waste as a viable means of energy generation, especially in rural communities with limited or no access to the national grid.

Keywords: Fossil fuel; renewable energy; farm waste; rural communities

292

An ethnobotanical survey of antiulcer plants in Ilorin, North Central Nigeria

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Abstract:

Plant-based medicines are known to be one of the most appealing sources of new drugs and have shown promising results in the treatment of a variety of diseases, including peptic ulcer; however, folk knowledge, particularly for the treatment of ulcers in Ilorin, has not been documented. The study seeks to identify commonly used medicinal plants,and explore the traditional knowledge and practices associated with their use in Ilorin Metropolis. A structured questionnaire was administered to traditional healers and community members to gather information on the medicinal plants commonly used for ulcer treatment, their preparation methods, dosage, and perceived efficacy. Additionally, plant specimens were collected and identified through botanical authentication. Data were analysed using descriptive statistics and thematic analysis to identify patterns and themes related to the utilization of medicinal plants for ulcer treatment.41 informants in Ilorin shared information on traditional medicinal plants and ulcer treatments, revealing 37 species from various families such as Crassulaceae, Annonaceae, Euphorbiaceae, Acslepiadaceae, and Cucurbitaceae, as well as Bryophyllum pinnatum (Lam). was cited the most (18 times) and ranked first (43.9%). Xylopia aethiopica (Dunnal)A.Rich. rated second (36.5%), with 15 citations. The study will serve as a source of information, and also aid in the dissemination of knowledge for future drug screening and development, emphasising the need for biodiversity conservation of traditional medicinal practices.

Keywords: Medicinal plants, ulcers, traditional medicine, Ilorin, Nigeria

312

Revolutionizing Agricultural Sustainability and Productivity through Precision and University Research Collaborations

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ABSTRACT:

The agriculture industry faces mounting pressure to meet the food demands of the country. Precision agriculture, which leverages technologies to optimize farm productivity, has been posited as a solution. A recent survey shows that integrating university research on precision agriculture with agricultural industries will enhance productivity in farming. This research goal is to investigate the challenges associated with university research collaborations in precision agriculture. The work will also involve developing applicable solutions for the agriculture industry. The work involves combining surveys and case studies with farmers to assess the current state of precision agriculture. Identification of barriers to adoption, and evaluation of the effectiveness of university research collaborations has also been carried out. The study reveals that university research collaborations can significantly enhance the adaptation and effectiveness of precision agriculture. The collaboration will lead to improvement of crop yields, reduce water and fertilizer usage, and increased eco-friendly practices. This research highlights the importance of university researching collaborations in promoting precision agriculture and sustainable agricultural practiced. The findings have the potential to guide Agricultural industries, and ultimately contribute to a more food-secure and environmentally conscious future.

Keywords: Agricultural sustainability, Precision agriculture, University research.

317

Artificial Intelligence-Powered Future: Smart, Secure, and Sustainable Nigeria

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Abstract:

In an era of rapid technological advancement, Artificial Intelligence (AI) offers transformative potential for Nigeria. This paper explores the application of AI solutions across key societal, economic, and environmental dimensions. AI promises to revolutionize healthcare, education, agriculture, and urban planning. By harnessing AI-powered data analytics, Nigeria can optimize resource allocation, streamline public services, and ultimately enhance citizen well-being.
Focus remains on security and resilience. AI-enabled cybersecurity safeguards infrastructure while ensuring citizen privacy. Additionally, AI bolsters disaster prediction and response, mitigating the impact of natural disasters. Sustainability is crucial, with AI promoting responsible resource management. Smart grids and precision agriculture minimize waste and conserve resources. This paper investigates AI's role in positioning Nigeria as a leader in sustainable development.
Embracing AI as a catalyst for progress is vital as Nigeria strives for a smart, secure, and sustainable future. This paper delves into the transformative power of AI, paving the way for a more innovative, prosperous, and equitable Nigeria.

Keywords: Artificial Intelligence (AI), Cybersecurity, Precision Agriculture,Smart Cities, Sustainable Development

318

Mobile-Controlled Water Management System

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Abstract:

This paper presents a novel water management system designed to address the global concern of water conservation. The system leverages an Arduino microcontroller to automate water level monitoring and dispensing within a storage tank.
The core functionality revolves around real-time water level detection. When the sensor detects a low water level, a pump automatically activates, filling the tank until reaching a pre-defined capacity. This ensures consistent water availability without manual intervention.
For water dispensing, the system introduces a user-friendly mobile application. Users can remotely control the desired water quantity by selecting a specific volume (in litres) on the app's interface. This data is then wirelessly transmitted to the Arduino micro-controller, triggering the pump to dispense the exact amount of water. Once the designated volume is dispensed, the pump automatically shuts off, preventing overflows and wastage.
This project offers a multifaceted approach to water management. It automates the refilling

process to maintain consistent water levels, eliminating the need for manual monitoring. Additionally, the mobile application empowers users with precise control over water dispensing, fostering responsible water utilization. The system effectively demonstrates the application of technology to environmental sustainability to promote efficient water utilization, contributing to a more sustainable future.

Keywords: Arduino, IoT, Mobile App, Remote Control, Water Conservation.

319

Modern Technology and Higher Education: Pioneering Solutions for Agriculture, Science, Healthcare, and Environment

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Abstract:

The convergence of Industry 4.0 technologies and Education 4.0 principles offers a transformative approach to global challenges in agriculture, healthcare, and sustainability. This paper explores ongoing initiatives that harness cutting-edge advancements like artificial intelligence (AI) and satellite technology to drive innovation and positive change.
In agriculture, AI-powered projects like AI4WA (AI for Women in Agriculture) and AI4IWA (Artificial Intelligence for Women in Agriculture) empower female farmers, promote sustainable practices, and enhance food security. Similarly, the S4DH (Satellite for Digital Health) initiative leverages satellite technology to bridge the healthcare access gap in remote and undeserved areas. These initiatives exemplify the vital role of multidisciplinary collaboration, as demonstrated by the alignment between autonomous vehicle development and the AI4CE (AI for Clean Energy) program.
This paper emphasizes the necessity of fostering inclusive, innovative, and interdisciplinary solutions through collaborative education. By harnessing the power of technology within an educational framework designed for the future (Education 4.0), we can pave the way for a more sustainable future. The full paper delves deeper into specific challenges, successes, and future directions for these initiatives, demonstrating the potential of technology to create a positive global impact.

Keywords: Agriculture, Artificial Intelligence, Clean Energy, Education 4.0, Industry 4.0

326

Navigating the New Era of Assisted Reproductive Technology: An Islamic Legal and Ethical Framework

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Abstract:

The act of reproduction is a fundamental aspect of human existence, shared universally among people regardless of religious, cultural, or social backgrounds. Childlessness is frequently stigmatized globally and can result in significant social distress, particularly for couples, especially women. In response to infertility, many individuals seek assistance through scientific methods, especially in developing nations where such resources may be limited. The use of scientific means to enhance fertility is a topical issue that cannot be overemphasized. According to the European Society for Human Reproduction and Embryology; more than eight million babies have been born using Artificial Reproductive Technology (ART) worldwide in the last 30 years. Islam acknowledges infertility as a challenge and permits seeking a cure, if the means of addressing it are lawful and in accordance with the Islamic principles. This paper explores the various options available to couples seeking assisted reproduction and delves into the Islamic viewpoint on different Assisted Reproductive Technologies (ART), aiming to discern the permissibility and limits of these technologies under Islamic law. It recommends that before pursuing ART, Muslim couples seek knowledge of Islamic law to determine which methods align with the Islamic principles and values. The paper concludes that, from an Islamic perspective, ART is permissible and encouraged, but only within the context of a valid marriage between a husband and wife, and solely during the duration of their marital contract.

Keywords: Infertility,Assisted Reproductive Technology, Islamic Law.

438

Catechin, Epicatechin and Quercetin against Gamma-irradiation-induced Mouse-Double-Minute-2 (Mdm-2) and p53 alterations in Cellular System of Rats

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Cell are prone to oxidative insults, mediated by ROS/RNS generation. Rat
exposure to gamma (γ) irradiation exacerbate ROS/RNS in cellular system. This insult led to overexpression of Mdm-2 proteins. An increased Mdm-2 expression will damage p53. p53 damage have been implicated in various cellular and genetic alterations. Plant materials have been used successfully to restore cellular genetic alterations mediated by Mdm-2 and p53 dysregulation. HPLC analysis of these plants have revealed the presence of the bioactive constituents such as catechin, eleagnin, astragalin, quercetin etc. Hence this study investigated the effects of Catechin, Epicatechin and Quercetin against γ-irradiation-induced Mdm-2 and p53 alterations in Rats. A total of thirty (30) rats (200 ± 5g) were distributed into 5 groups of 6
each. Except group 1, all other groups were exposed to 6 grey γ-irradiation. Group 2 were fed with rat chow and water only, groups 3, 4 and 5 were administered catechin (CAT), epicatechin (EPC) and quercetin (QCT) at 40 mg/kg body weight respectively. The rats were sacrificed and biochemical parameters were assayed. Data were analyzed using SPSS. Irradiation significantly ($p<0.05$) increased Mdm-2 and significantly ($p<0.05$) decreased p53 concentration of irradiated rats respectively. Administration of CAT, EPC and QCT to irradiated rats significantly ($p<0.05$) decreased Mdm-2 and a corresponding significant ($p<0.05$) increased in p53 concentration respectively when compared with control. CAT, EPC and QCT have restored cellular alterations caused by γ-irradiation,
hence can be used as protection against irradiation-induced alterations.

Keywords: Mdm-2, p53, catechin, epicatechin, irradiation, alteration,

171

Adaptability of Artificial Intelligence (AI) to Indigenous Knowledge of Agricultural Practices by Local Farmers in North Central, Nigeria

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Abstract

The paper was aimed at identifying the Adaptability of Artificial Intelligence (AI) to Indigenous Knowledge of Agricultural practices by Local Farmers in North central, Nigeria. Towards this end 350 traditional agricultural consisting of 238 males and 112 females practitioners were selected across the states of the region, including the Federal Capital Territory (FCT), by means of sheer random sampling technique three research questions were raised concerning the farmers attitude towards the integration of AI potential impacts on the sustainability of their agricultural practices. The research instrument was titled "Attitude of indigenous agricultural practitioners to the adaption of Artificial Intelligence (AI) questionnaire", Which was structured. Results indicated that, although the agricultural practitioners had positive attitude towards AI, there is a critical need for culturally sensitive approaches. The study also revealed the importance of tailoring AI solutions that align with the unique needs and values of various North Central Nigeria indigenous communities. Furthermore, there should be collaborative efforts among technologists, anthropologists and local agricultural practitioners for the purpose of designing AI systems that enhance indigenous knowledge in agricultural practices. It was recommended that the government should encourage active involvement of indigenous agricultural practitioners in the design, implementation and evaluations of AI integration initiatives, so as to ensure that AI solutions align with local needs and preference within the cultural contexts. Furthermore, the government should carry out robust monitoring and evaluation mechanisms to assess the impact of AI integration on indigenous knowledge systems, perceptions and sustainability. These include collecting relevant data, soliciting feedback from stakeholders and adapting strategies based on findings.

Keywords: Adaptability, Artificial intelligence, Indigenous knowledge, Agricultural practices, Local farmers, Nigeria.

440

Prediction of Phytochemical Constituents in solvent extracts from Dioscorea dumetorum Tubers Using Artificial Intelligence

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Abstract
Dioscorea dumetorum tubers, known as bitter yam, hold promise for both nutrition and medicine. The rich nutrient and phytochemical content of its two major cultivars (white and yellow) contribute to various therapeutic activities, including anti-inflammatory effects. Traditionally used to manage ailments like jaundice, malaria, and diabetes, this plant offers a wealth of potentially valuable pharmaceutical compounds. However, traditional methods for identifying these phytochemicals are labour-intensive and time-consuming. This study explores the use of Artificial Intelligence (AI) for faster prediction of their phytochemical compounds using Deep Learning (DL). DL, an AI technique, utilizes layered neural networks to analyze solvent extracts from Dioscorea dumetorum tubers and predict their phytochemical constituents. The solvent type used in the extraction process such as methanol, water, or ethanol is encoded as a categorical variable. The output data comprises known phytochemical constituents identified in the plant using traditional methods represented in different ways including binary classification, multi-class classification and concentration prediction. A large dataset of plant extracts with known phytochemical profiles is used to train the model. The model learns the relationships between solvent extracts, and the presence or concentration of phytochemicals. This research underscores the growing role of AI in Science, Technology, Engineering, and Mathematics (STEM), with promising applications in pharmaceutical science. It further provides a quicker and more efficient way to reveal the potentials of bitter yam and other medicinal plants.

Keywords: Dioscorea dumetorum, photochemical constituents, artificial intelligence, solvent extracts