ASSOCIATION FOR FAMILY AND SOCIETY SCIENTISTS

5TH ANNUAL INTERNATIONAL CONFERENCE (VIRTUAL), 2026

BOOK OF ABSTRACT

THEME:

ARTIFICIAL INTELLIGENCE AND SOCIAL INNOVATION: OPPORTUNITIES, CHALLENGES, AND ETHICAL DILEMMAS

DATE: 26TH & 27TH MARCH, 2026

VENUE: ZOOM MEETING PLATFORM

ASSOCIATION FOR FAMILY AND SOCIETY SCIENTISTS (AFASS)

KEYNOTE SPEAKER:
PROF. N. E. IBEZIM
UNIVERSITY OF NIGERIA, NSUKKA

LEAD PAPER PRESENTER:
DR C. UZUEGBUNAM
RHODES UNIVERSITY, SOUTH AFRICA

WORKSHOP FACILITATOR:
DR E. C. NWANGWU
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PRESIDENT
PROF. FRANCA O. OKECHUKWU
UNIVERSITY OF NIGERIA, NSUKKA

LOCAL ORGANIZING COMMITTEE

Chairman	**Prof. Philip C. Mefoh**
Secretary	**Mrs Ezinne J. Nwauzoije**
Sub-committees	
Publication	**Dr Uju I. Nnubia**
Administration	**Mrs Chidiogo L. Umennuihe**
Publicity/Media	**Dr Kalu T.U. Ogba**
Finance	**Mrs Adaobi C. Nwobi**

PROGRAMME OF EVENTS

Mock Presentation: Wednesday, 25th March 2026

10:00 am – 10:05 am: Participant login.

10:05 am – 10:35 am Mock presentation

Opening Ceremony: Thursday, 26th March 2026

8:30 am – 9:00 am: Participant login.

9:00 am – 9:05 am: Recognition of resource persons and conference participants

9:05 am – 9:10 am: Opening Prayer

9:10 am – 9:15 am: Opening Remarks by President of AFASS (Prof. F.O. Okechukwu)

9:15 am – 9:25 am: Welcome Address by the Vice Chancellor (Prof. S.U. Ortuanya)

9:25 am – 9:35 am: Welcome Address by the Dean, Faculty of Agriculture (Prof. J. I. Eze)

9:35 am – 10:40 am: Keynote Paper Presentation/questions (Prof. Mrs N. E. Ibezim)

10:40 am – 11:45 am: Lead Paper Presentation/questions (Dr C. Uzuegbunam)

11:45 am – 11:50 pm: Vote of Thanks by LOC Chairman (Prof. P. C. Mefoh)

11:50 am – 12:00 pm: Short Break

12:00 pm – 1:35 pm: Workshop on AI in Research and Academic Writing (Dr E. C. Nwangwu)

3:10 pm – 3:15 pm: Closing remarks/prayer.

Plenary Session: Friday, 27th March 2026

8:30 am – 9:00 am: Participants logging in to their rooms.

9:00 am – 9:05 am: Opening Prayer

9:05 am – 2:00 pm: Plenary session

2:00 pm – 2:45 pm: Annual General Meeting/Presentation of Award

2:45 pm – 2:50 pm: Vote of thanks

PRESENTATION SCHEDULE FOR THE PLENARY SESSIONS ON 27TH MARCH 2026

Thematic area: Social Sciences

Chairperson: Dr Moses Ilim
Rapporteur: Ms. Chisom Ogbuanya
Presentation assessor/support: Mrs Chibundo Nwobi
Time: 9:05 am

S/N	Abstract title	Author(s)
	SOCIAL SCIENCES	
1	**Artificial Intelligence and the Future of Families in Kano Municipality: Opportunities, Challenges, and Ethical Dilemmas**	Buhari, U.B., Zangina, A.M., Abubakar, J.I., & Haruna, H.A.
2	**Adoption of Artificial Intelligence in E-Commerce: Assessing Informal Merchants' Perspectives in Enugu, Nigeria Using the Technology Acceptance Model**	Ogbuanya, C.E.
3	**Knowledge and Perceptions of Digital Applications for Menstrual Cycle Monitoring and Management among Women of Child-Bearing Age in Federal University Dutsin-Ma**	Ilim, M.M. (PhD), Ogu, I.J. (PhD), & Pinga, E.S.
4	**Perception of Behavioural Disorders amongst Parents of Children aged 1 to 12 in Ede-Oballa, Nsukka**	Okey-Eze S. C., John D.O., Chukwujindu A.M., Okechukwu M.E., & Asogwa M.E.
5	**Working-Class Men's Involvement in Domestic Chores Within Nuclear Families in North-Central Nigeria**	Maigari, O., Chukwuone, C., & Dansokoto, M.K.
6	**Artificial Intelligence and Electoral Process in Nigeria: Opportunities and Challenges**	Oriaku, N.A.
7	**Relationship Between Dietary Patterns and Mental Health of Undergraduates in the University of Nigeria, Nsukka**	Nwobi, C. A., Owoh, N.P., Oguejiofor, O.M. & Anih, E.U.
8	**Role of Artificial Intelligence in Family Resource Management Skills of Housewives in Enugu Urban**	Owoh, N.P (PhD), Okoye, O.I (PhD), Nwobi, A.C., & Ani, P.N.
9	**A Sociotechnical Systems Perspective on How Algorithmic Socialisation Influences Young People's Agency**	Umennuihe, C.L., Okechukwu, F.O., & Umennuihe, A.E.
10	**'Spare the Rod and Spoil the Child': Reading Selected Biblical Proverbs in the Light of Corporal Punishment in Child Upbringing**	Chukwuma, O.G.[1] (PhD)
11	**Perceived Impact of Social Media on Peer Relationships, Body Image Concern and Social Well-Being on Adolescents in Nsukka Urban**	Obi, R. N., Okechukwu, F.O., & Onodingene, U. L.
12	**Perceived role of artificial intelligence in enhancing household food security in Nsukka Local Government Area, Enugu State**	Agu, R.I., & Mojekwu, U.R.
13	**Identity Fusion and Self-Regulation as Predictors of Condom Use among University Freshmen: The moderating Role of Religiosity**	Nnamchi, O.C., Ike, O.O., Agu, E.C., Okafor, C.O., & Ogbu, F.E.

14	**Social Media Use and Eating Disorder among Emerging Adults: Moderating Role of Self-Esteem**	Ogba, K.T.U., & Ugwu, C.E.
15	**Intolerance of Uncertainty and Eco-anxiety: A Systematic Literature Review (2001-2005)**	Nwankwo, O., & Mefoh, P.
16	**Harnessing Artificial Intelligence (AI) Technologies for Social Innovation in Textile Waste Management in Benue State**	Gera, N.P., Offiong, P.E., & Kuranen-Joko, D.N.
17	**Prevalence and Awareness of Postpartum Depression among Nursing Mothers (20-49 Years) in Benue State, Nigeria**	Aondoakaa, B.N., Ibeanu, V.N., & Okechukwu, F.O.
18	**Algorithmic Care in Nigerian Homes: Household Parenting Practices and Child Development in the Context of Artificial Intelligence — A Comparative Survey of Parents and Secondary School Students in Oyo State**	Segilola, V.O., & Afonja, T.E.

Thematic area: Science

Chairperson: Dr Odenigbo C.I.

Rapporteur: Ms. Chidera Obi

Presentation assessor and support: Dr Uju Nnubia

Time: 9:05 am

S/N	Abstract title	Author(s)
	SCIENCE	
1	**Detection of Lung Cancer Using an Optimised Convolutional Neural Network (CNN) Algorithm**	Usman, M.S., Ojerinde, O.A., & Aminu, E.F.
2	**Artificial Intelligence Technologies and Livestock Farmers in Nsukka, Enugu State**	Odenigbo, C.I., (PhD) & Ajibo, D.U. (PhD)
3	**Algorithmic Exposure to Nutrition Content on Social Media and Its Influence on Knowledge, Attitudes, and Dietary Practices of Undergraduates of the University of Nigeria, Nsukka**	Onodugo, N.G., Onyeke, N.G., & Eze, C.I.
4	**Comparative Study of AI-Generated Nutritional Advice and Conventional Nutrition Education among Communities in Benue State, Nigeria**	Odudu, J.H. & Ashaver, V.A.
5	**Sensory and Nutrient Analysis of Biscuits Made from Tropical Almond (*Terminalia catappa*) Seed Flour and Wheat Flour Blend**	Nnubia, Uju I., Obi, Chidera V., Ogbu, Helen C., & Odo, B.
6	**Economic Effects of Artificial Intelligence (AI) -Driven Mechanisation on Farm Labour in Nigeria's Agricultural Sector: A Conceptual Review**	Nwokah, O.B., Morgan, N.C., & Obiene, M.M.
7	**Effects of Watermelon Rind Addition on Micronutrient Composition and Sensory Attributes of Pork Patties**	Omeje, C.P., Ovute, C.N., Ezeh, C.M., & Anigor, E.
8	**The Effect of Different Cooking Times on the Nutrient and Phytochemical Composition of *Sarcocephalus Latifolius* (African Peach) Leaves**	Ezegbe, A.G., Egumgbe, U.D., Okoye, O.I., Ukala, C.U.

9	**Perception and Health Seeking Behaviour for Obstetric Complications among Women of Reproductive Age in Gusau Metropolis, Zamfara State**	Itiat, J.F.
10	**Nutritional Knowledge and Factors Influencing Birth Spacing Among Married Women in Amorji-Nike, Enugu State, Nigeria**	Onyeke, N.G., Izuoba, C.F., Igwesi, U.L., Ukala, C.U., & Nwobi, C.A.
11	**Fuzzy-Based Gas Leakage Detection System Using Arduino Microcomputer**	Olusola, T.F.
12	***In Vitro* Lipase Analysis of Beeswax Caplets Containing *Azadirachta Indica* Ethanol Extract for the Treatment of Malaria**	Mama, I.I., Attama, A.A., & Agbo, C.P.
13	**Delineating the Aptness of Improved Geomaterial Strength for Ground Improvement through Microstructure and Cluster Analysis**	Nwonu, D.C., & Mama, C.N.
14	**Effect of Food Processing Methods on Nutritive Value of Agricultural Food Products and their Health Implications: An Artificial Intelligence-Driven Review**	Udenta, E.A., & Okeke, C.M.
15	**Proximate composition, functional Properties and acceptability of swallow made from unripe banana flour (Musa Paradisiaca)**	Egumgbe, U.D., Ezegbe, A.G., Ilo, O.O., & Asogwa, R.N.
16	**An AI-Based Computer Vision Framework to Minimise Post-Consumer Textile Waste In Small-Scale Artisanal Hubs**	Akila, L. K. Mwanle, G. C.
17	**A Structural Analysis of the Determinants of Consumer Preference for Cow Skin (Ponmo) in Nigerian Cuisine**	Shu'ara, J., & Okechukwu, F.O.

Thematic area: Education

Chairperson: Dr Timothy Ogba

Rapporteur/Presentation support: Mrs Chidiogo Umennuihe

Presentation assessor: Mrs Ezinne Nwauzoije

Time: 9:05 am

S/N	Abstract title	Author(s)
	EDUCATION	
1	**Opportunities, Challenges, and Ethical Implications of Artificial Intelligence in Home Economics Education at Federal College of Education (FCE), Kano**	Buhari, S.B., Abubakar, J.I., Sani, M., Dogo, K.A., & Mukhtar, M.
2	**Development of a Reinforcement Learning Model for Optimising Bed Allocation and Resource Management in Hospital Environments: A Framework**	Asaolu, O.O., Alhassan, J.K., Ojeniyi, J.A., & Ojerinde, O.A.
3	**Enhancing Basic Science Achievement among Primary School Learners: A Quasi-Experimental Study of a Simulation-Based Instructional Module**	Okenyi, E.C., Ugwuanyi, C.S., Anichebe, N.C., & Patrick, P.C.
4	**Artificial Intelligence-Based Educational Applications: A Correlational Study of Early Literacy Achievement among Primary School Learners**	Anichebe, N.C. (PhD), Asogwa, H.E. (PhD), Ngwoke, A.N. (PhD), Aneke, A.N. (PhD), Ezema, V.S. (PhD), Okenyi, E.C. (PhD)

5	**AI-Driven Learning in Higher Education: Examining Gender Differences in Information Literacy and Research Skills Development among Economics Education Students in Federal Universities in Southeast Nigeria**	Ejimonye, J.C. (PhD)
6	**AI in Education: Exploring Equitable Outcomes for Diverse Learners in the School Systems in Nigeria**	Nnubia, U. I., & Oganah-Ikujenyo, B. C.
7	**Social Disconnection and Online Immersion: A Correlational Study of Internet Gaming Disorder and Loneliness among Adolescents in Enugu East Urban**	Umennuihe, C.L., Nnadi, M.U., Adeyemo, D.O., & Onyeji, A.O.
8	**Human-AI Collaboration and Work-Life Balance: Rethinking Ethical Usage and Optimisation of ChatGPT in Academic Writing**	Emeh, I. & Nwachukwu, C.
9	**Impact of Artificial Intelligence Adoption on Learning Outcomes of Business Education Students in Public Universities in Enugu State**	Iheagwam, B.N., & Anorue, H.C.
10	**Students' Awareness, Perceived Benefits, and Challenges of Using Artificial Intelligence among Agricultural Education Students in Enugu State, Nigeria**	Okadi, A.O., (PhD) & Ayang, F.A. (PhD)
11	**Effective Interventions on Word Decoding and Reading Fluency of Dyslexic Children: An Empirical Review**	Madukaife, C.C. & Mefoh, P.C.
12	**AI-Powered Instructional Materials for Effective Teaching of a Vocational Subject in Nsukka Primary Schools**	Kalu, E.P., (PhD), Omeke, N.S., Ezeaku, M.N., & Nwandu, L.O.
13	**Artificial Intelligence and Early Childhood Development (ages 0-6): Exploring the Benefits, Risks and Ethical Consequences**	Omaliko, J.C., & Onwuama, O.P.
14	**Utilisation of Artificial Intelligence for Enhancing Pre-Service Home Economics Teachers' Instructional Effectiveness in Home Economics in Abia State**	Dr Sagbara, D.S., Dr Ezea, C.E., & Dr Ndubuka, C.I.
15	**Roles Of Emotional Intelligence, Academic Self-Concept and School Type on Problematic ChatGPT Use among Undergraduate Students**	Samuel, H.E., & Omoniyi, M.E.
16	**Impacts of Artificial Intelligence (AI) Tool and Gender on Problem-Solving Ability among Undergraduates**	Paul, J.U., & Omoniyi, E.M.
17	**Impacts of Artificial Intelligence Photo Editing Usage, Body Consciousness, Media Portrayed Ideal Body Image on Self-Esteem Among Undergraduate Netizens**	Ogbonna, O.B., Omoniyi, E.M., & Ndubuisi, O.O.
18	**Family Functioning and Resilience among Children with Sensory Disabilities: Moderated Mediation of Achievement Motivation in Special Interests across perceived Social Acceptance Levels**	Nwauzoije, E. J., Dike, I.C., & Ihembu, F. C.
19	**Parents and Teachers' Perception of the Role of Digital Media Consumption and Household Environment on School-aged Children's School Readiness in Enugu North Urban**	Okechukwu, F.O., Onyekachi, C.C., Okoroigwe, C.N., & Asogwa, C. F.
20	**Lecturers' Perception of the Integration of Artificial Intelligence in the Instructional Delivery of Vocational Education in the Federal Colleges of Education in Southeast Nigeria**	Uloh, E.V. (PhD), Onyeke, A.C., Nnaji, J.R., & Onyegbule, B.A.

TABLE OF CONTENTS

001. Knowledge and Perceptions of Digital Applications for Menstrual Cycle Monitoring and Management among Women of Child-Bearing Age in Federal University Dutsin-Ma

Ilim, M.M. (PhD)[1], Ogu, I.J. (PhD)[2], & Pinga, E.S.[3]
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[2]Department of Sociology & Anthropology, University of Nigeria, Nsukka
[3]Department of Sociology, Rev. Fr. Moses Orshio Adasu University, Makurdi
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Abstract
Menstrual health remains a sensitive and important component of women's reproductive health, child spacing and population policies. Proper and effective monitoring of the menstrual cycle provides a clear understanding of menstrual health, thereby helping to prevent unintended pregnancies. However, with a heavy workload at home and demand in the public sphere, proper and effective monitoring of the menstrual cycle by women becomes a serious challenge. With the evolution of digital applications for monitoring menstrual cycles and health, women with busy schedules now have options for tracking and managing their cycles. This study assessed women's knowledge and perceptions of digital application design for monitoring their menstrual cycles at the Federal University Dutsin-Ma, Katsina State. The aim of the study is to evaluate women's knowledge, attitudes, and utilisation patterns of menstrual-tracking mobile applications, and to identify barriers to their use. Specific objectives include identifying commonly used digital applications for tracking the menstrual cycle, among others. A descriptive cross-sectional design is employed. The study population comprised students and female staff of childbearing age (15-50 years). Quantitative data were gathered from 210 students across various faculties of the University using a pre-tested, semi-structured, self-administered questionnaire. IDI is also being used to collect qualitative data from female staff across Departments and non-academic units. Being an ongoing study, the findings will be reported as soon as data collection and analyses is completed. Conclusions and recommendations will be drawn subsequently based on the findings.
Keywords: Awareness, Digital application, Knowledge and perception; Menstruation, Menstrual Cycle, Utilisation

002. Perception and Health Seeking Behaviour for Obstetric Complications among Women of Reproductive Age in Gusau Metropolis, Zamfara State

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Abstract
This study explored perceptions and health-seeking behaviours regarding obstetric complications among women of reproductive age in Gusau, Zamfara State, using a descriptive cross-sectional survey of 400 respondents. Data collected via a structured questionnaire were analysed using SPSS version 22, employing descriptive and inferential statistics, with Chi-square tests used to assess relationships among variables. Key findings showed that most respondents had a positive perception of obstetric complications (mean score: 3.54), with common symptoms including dizziness, swollen hands/face, and severe bleeding during pregnancy, labour, and postpartum.

Health-seeking behaviours were generally favourable, marked by antenatal clinic attendance (70.5%), use of routine medications (iron: 59.0%, folic acid: 65.0%, malaria prophylaxis: 68.3%), and hospital deliveries (56.8%). Perceptions of complications were significantly correlated with the timing of antenatal care, visit frequency, use of supplements, and choice of delivery location. The paper suggests boosting health awareness campaigns on obstetric complications through partnerships between the government and non-governmental organisations to curb complications and maternal mortality. Strategic nutrition education during antenatal clinics was recommended, as Artificial intelligence (AI) can process large datasets faster, identifying trends and risk factors more efficiently.

Keywords: Perception, Health-seeking behaviour, Obstetric complications, Women of reproductive age, Gusau metropolis.

003. Investigation into the Negative Effects of Artificial Intelligence Tools on Students' Academic Performance in Tertiary Institutions in Kano State

Abubakar, S.E.[1], & Isa, I.[2]

[1,2]Yusuf Maitama Sule Federal University of Education, Kano State

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Abstract

The use of Artificial Intelligence (AI) tools in educational and research settings is widely spreading, bringing opportunities and challenges to the learning environment. As AI tools such as Grammarly, QuillBot, ChatGPT, and other AI-based platforms become part of students' everyday study practices, they significantly impact their creativity and academic emotions. The students' excessive reliance on these tools is gradually causing them to think outside the box in proposing solutions to existing problems. This, therefore, weakens students' academic performance, particularly in decision-making. This study aimed to investigate the negative effects of artificial intelligence tools on students' academic performance in tertiary institutions in Kano State. To conduct this research, a questionnaire will be used to collect data from students and academic staff of federal and state-owned institutions within the Kano State metropolis. The collected data will be analysed using statistical methods, such as ANOVA and t-tests. The research outcomes will be highlighted, and recommendations will be provided.

Keywords: Artificial intelligence, Academic performance, Tertiary institutions, AI tools.

004. Effectiveness of Digital Collaborative Learning Platforms in Enhancing Mathematical Reasoning and Promoting Equity among Secondary School Students in the Katsina Zonal Education Quality Assurance Area

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Abstract

This study investigated the effectiveness of digital collaborative learning platforms in enhancing mathematical reasoning and promoting equity among secondary school students in the Katsina Zonal Education Quality Assurance area, Katsina State, Nigeria. The study was guided by two research objectives and two corresponding research questions, with hypotheses tested at the 0.05 significance level. A sample of 113 SS II students was drawn from a population of 16,868 students (8,648 males and 8,220 females) in public secondary schools within the zone. A quasi-experimental research design was employed, featuring an experimental group taught using digital collaborative learning platforms and a control group instructed through traditional teacher-centred methods. Data were collected using two validated instruments: the Mathematical Reasoning Performance Test (MRPT) and the Equity in Learning Opportunity Scale (ELOS), with established validity and reliability coefficients of 0.897 and 0.753, respectively. Descriptive statistics and ANCOVA were used for analysis. The findings revealed that students exposed to digital collaborative learning platforms demonstrated significantly higher levels of mathematical reasoning compared to their counterparts in the control group. Additionally, digital platforms contributed to improved learning equity by expanding access to learning resources, supporting peer collaboration, and providing inclusive environments that accommodate diverse learner needs. The study recommends that educators, school leaders, and policymakers integrate digital collaborative platforms into routine mathematics instruction. Doing so aligns with regional and global efforts toward inclusive, technology-driven educational systems that enhance learning outcomes and ensure equitable learning opportunities for all students.

Keywords: Digital collaborative learning, Mathematical reasoning, Equity, Educational technology, Mathematics.

005. Effect of Online Interactive Instructional Resources on Students' Performance in Algebraic Fractions among Senior Secondary Schools in Kano Metropolis, Nigeria

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Abstract

This study examined the Effect of Online Instructional Resources on Students' Performance in Algebraic fractions among Senior Secondary schools in Kano Metropolis, Nigeria. Two research objectives, two research questions and two null hypotheses guided the study. A quasi-experimental design involving a pretest, posttest, post-posttest, and control group was adopted. The study involved two groups: the experimental group was taught algebraic fractions using Online Interactive Instructional Resources (OIIR), while the control group used the Conventional Lecture Method (CLM). The study population consisted of 21,397 SSII students in the Municipal and Nasarawa educational zones of the Kano metropolitan area. A multistage sampling technique was applied to select a sample of 164 students (87 boys and 77 girls) drawn from four secondary schools in the two educational zones, where four (4) intact classes were used for the study: one experimental and one control group from each zone. The Algebra Performance Test (APT) was used to collect data. Descriptive statistics of means and standard deviations were used to answer the research questions. Null hypotheses were analysed using an Independent t-test and were tested at = 0.05 level of significance. The result of the analysis showed that the experimental group OIIR performed significantly better than their counterpart in the control group (CLM). However, there was no significant difference between male and female students taught algebraic fractions with OIIR. It was recommended, among others, that programmers be encouraged by Government

patronage to use a mathematics curriculum in the design of web-based (OIIR) applications for use within the Nigerian school system, and that they be equally arranged by class.
Keywords: Online instructional resources, Academic performance, Algebraic fractions, Gender

006. Adoption of Artificial Intelligence in E-Commerce: Assessing Informal Merchants' Perspectives in Enugu, Nigeria Using the Technology Acceptance Model

***Ogbuanya, C.E.[1]**
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Abstract
Artificial intelligence in electronic commerce (e-commerce) is one of the major technological advances in the digitalisation of economic activity, changing the global industry. However, adopting artificial intelligence in e-commerce (AI-E) in developing regions is still in its infancy, and there is a dearth of studies that give insight into factors that determine AI-E adoption. Understanding the drivers of AI-E adoption is crucial for identifying the gaps that AI-E researchers and policymakers need to address to accelerate adoption. This paper evaluates the adoption of AI-E by applying the Technology Acceptance Model (TAM). Physical interviews and organised paper surveys constitute the collected data. In Enugu, Nigeria, 176 informal merchants and street hawkers participated in the survey. Perceived usefulness and perceived ease of use are the main drivers of AI-E adoption in the informal economy. This research will help policymakers improve the development of a developing country.
Keywords: Artificial intelligence, E-commerce, Technology acceptance model, Economy

007. Development and Validation of Automobile Ignition System Maintenance Training Module for Technical College Students in North-East, Nigeria

Suwidi Salisu
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Abstract
The study was designed to develop an automobile ignition system maintenance training module for technical college students in the North-East, Nigeria. Two research questions were answered, and one null hypothesis was tested at a 0.05 level of significance. Research and Development (R&D) design was used for the study. The study population comprised 156 individuals (113 teachers and 43 instructors). Since the population is manageable, no sample was used. A pilot test was conducted at Government Technical College, Mashi, Katsina State, North-Western Nigeria, and a reliability coefficient of 0.941 was obtained using Cronbach's alpha. The data collected were analysed using descriptive statistics (mean and standard deviation), while the null hypothesis was tested using inferential statistics (independent sample t-test) at a 0.05 level of significance. The study's findings revealed that all the items in the content are required for developing automobile ignition system maintenance training modules. The result of the null hypothesis tested revealed that there is no significant difference between the mean responses of teachers and instructors on the contents of the module. The study developed an ignition system self-instructional module with

detailed, step-by-step instructions for technical college students in the North-Eastern region of Nigeria. Experts' ratings of the developed ignition system training module revealed that it is rated very good across its objectives, content, materials, delivery methods, evaluation criteria, format, language, sequence, and usefulness. The developed module is therefore valid.
Keywords: Development and validation, Ignition system maintenance, Training modules, Technical Colleges.

008. Impact of the Eduphys AI Tutor on the Learning Achievement of Undergraduate Physics Students at Federal University Dutsin-Ma, Katsina State, Nigeria

Ahmed Salihu
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Abstract
This exploratory quantitative study investigated the impact of the EduPhys AI Tutor on the learning achievement of undergraduate physics students at Federal University Dutsin-Ma, Katsina State, Nigeria. Physics education in Nigeria faces significant challenges, including the abstract nature of concepts, the mathematical demands, and resource limitations. The EduPhys AI Tutor, an AI-powered learning aid, was designed to address these by providing adaptive content, practice problems, and personalised feedback. Utilising a pre-test/post-test approach with a single cohort of 18 Physics Education students (15 300-level, 3 200-level), achievement was measured using a researcher-developed Physics Achievement Test (PAT). Statistical analysis, including a paired-samples t-test and Cohen's d, was performed using SPSS. The findings revealed a highly statistically significant increase in mean post-test scores ($M = 17.44$, $SD = 1.338$) compared to pre-test scores ($M = 13.61$, $SD = 1.577$), with a mean difference of 3.83 points ($p < .001$). The calculated Cohen's d of approximately 1.72 indicates a very large effect size, suggesting substantial improvement for this group. While this study provides strong initial evidence that aligns with the literature on the benefits of AI tutors, its small sample size limits generalizability and direct comparative claims against traditional methods. This research suggests that the EduPhys AI Tutor has significant potential as a supplementary tool in Nigerian physics education, warranting further larger-scale investigations.
Keywords: EduPhys AI tutor, Physics education, Undergraduate students, Learning achievement, Quantitative study.

009. Artificial Intelligence and the Future of Families in Kano Municipality: Opportunities, Challenges, and Ethical Dilemmas

***Buhari, U.B.,[1] Zangina, A.M.,[2] Abubakar, J.I.,[3] & Haruna, H.A.[4]**
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Abstract
This study examined the opportunities, challenges, and ethical dilemmas associated with AI use among families in Kano Municipality. The primary objectives were to identify the opportunities AI offers for family life, examine the challenges hindering its adoption, and assess the ethical dilemmas associated with its domestic use. A descriptive survey research design was adopted, targeting a population of 1,000 household heads, from which a sample of 100 respondents was selected using purposive and simple random sampling techniques. Data were collected via a structured Likert-scale questionnaire and analysed using mean scores and standard deviation. The findings revealed that while AI presents notable opportunities for communication, learning, and financial livelihood ($x = 3.79$), significant infrastructural barriers persist. Frequent power outages ($x=4.53$) and the high cost of data ($x=4.48$) were identified as the most severe constraints, creating a "digital divide" in the municipality. Furthermore, the study highlighted critical ethical concerns (grand mean = 4.00), particularly regarding data privacy ($x = 4.20$) and the erosion of traditional Hausa/Islamic values ($x = 3.90$), such as parental authority and modesty. The study concludes that AI adoption in Kano is a "double-edged sword," requiring a balance between technological innovation and cultural preservation. It is recommended that the Kano State Government and local stakeholders prioritise the localisation of AI into Hausa, invest in solar-powered digital hubs, and implement culturally sensitive AI literacy programs to ensure that technology strengthens rather than disrupts the family unit.
Keywords: Artificial intelligence (AI)**,** Family cohesion**,** Kano Municipality, Digital literacy and Ethical dilemmas.

010. Effects of Watermelon Rind Addition on Micronutrient Composition and Sensory Attributes of Pork Patties

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Abstract
This study focused on nutrient profiling and sensory data generation from watermelon rind–enriched pork patties, highlighting their relevance to personalised nutrition and secure dietary decision-making. Five pork patty formulations were produced using varying proportions of minced pork meat (PM), wheat flour (WF), and watermelon rind powder (WMRP) at ratios of 50:50:0, 50:40:10, 50:30:20, 50:20:30, and 50:10:40 (PM: WF: WMRP). The samples were coded as PP1–PP5, with PP1 serving as the control. Standard analytical methods were used to determine levels

of selected micronutrients (iron, vitamin A, and vitamin C), and sensory attributes were evaluated using a structured sensory assessment. The data generated were statistically analysed using SPSS version 23.0 to ensure the accuracy and reliability of nutritional and sensory datasets. The results showed iron, vitamin A, and vitamin C contents ranging from 0.90 to 1.89 mg/100 g, 0.27 to 1.05 mg/100 g, and 2.31 to 2.59 mg/100 g, respectively. Incorporation of WMRP significantly increased vitamin A and vitamin C levels in the pork patties. Sensory evaluation revealed mean scores ranging from 5.30 (neither liked nor disliked) to 7.10 (moderately liked) across appearance, crumb colour, crust colour, flavour, texture, mouthfeel, and overall acceptability. No significant difference ($p \leq 0.05$) was observed between the control sample (PP1) and patties containing up to 20% WMRP (PP2 and PP3). Patties formulated with 10% WMRP (PP2) recorded the highest preference score (6.5/10). The study demonstrates that nutritionally enhanced and consumer-acceptable pork patties can be produced using watermelon rind powder as an ingredient.
Keywords: Watermelon rind powder, Pork patties, Micronutrient enrichment, Sensory evaluation, Functional meat products

011. Detection of Lung Cancer Using an Optimised Convolutional Neural Network (CNN) Algorithm

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Abstract
Cancer is a wide range of diseases that can start in almost any organ or tissue of the body when abnormal cells multiply uncontrollably, and cross normal boundaries to invade neighbouring tissues, or spread to other organs. Traditional approaches reliant on lung cancer detection are time-consuming; these approaches include computed tomography CT scans, magnetic resonance imaging MRI, and positron emission tomography PET. This necessitates a paradigm shift towards more sophisticated methodologies. In response, this study introduces a conceptual framework for lung cancer detection by leveraging the power of optimised deep learning algorithms. Data preprocessing approaches subsume noise removal, data cleaning, augmentation, scaling, outlier and null value removal, among others. To effectively diagnose lung cancer in patients, we employed supervised learning classification models and a Convolutional Neural Network trained with the Grey Wolf optimisation algorithm.
Keywords: Deep learning, Lung cancer, CNN, Grey wolf, Optimisation algorithms.

012. Opportunities, Challenges, and Ethical Implications of Artificial Intelligence in Home Economics Education at Federal College of Education (FCE), Kano

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Abstract
This study examined the opportunities, challenges, and ethical implications of AI in Home Economics education at the Federal College of Education (FCE), Kano. The study aimed to identify how AI enhances practical skill acquisition, the barriers to its adoption in a college setting, and the moral concerns regarding data privacy and the automation of traditional domestic arts. A descriptive survey research design was adopted. The population comprised 50 Home Economics students at FCE Kano, and 50 respondents were selected as the sample size. Data were collected using a structured questionnaire. The data were analysed using frequency counts, percentages, and mean scores with a criterion benchmark of 2.50. Results indicated that while AI offers significant opportunities for personalised nutrition analysis and smart home management simulations, challenges such as inadequate laboratory infrastructure and high costs of specialised software persist. Ethical implications centred on the potential erosion of manual craft skills and data surveillance. The study concludes that AI is an essential tool for modernising Home Economics, provided it is implemented within a culturally and ethically sound framework. It is recommended that the college management prioritise the establishment of a dedicated AI-integrated Home Economics laboratory to facilitate hands-on digital training for both staff and students.
Keywords: Artificial intelligence, Home Economics Education, Vocational pedagogy, Ethical implications, FCE Kano

013. Artificial Intelligence in Climate-Smart and Sustainable Agriculture in Nigeria

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Abstract
Climate change is profoundly reshaping agricultural systems worldwide, and Nigeria — where agriculture supports over 70% of the population — is particularly vulnerable to climate variability, drought, flooding, and soil degradation. Traditional agricultural methods and climate adaptation strategies have proven insufficient in meeting rising productivity and sustainability demands. Amid these challenges, Artificial Intelligence (AI) emerges as a transformative technology with the potential to enhance decision-making, optimise resource use, improve climate resilience, and

boost food security across diverse agro-ecological zones. This paper examines the role of AI in enabling climate-smart and sustainable agriculture in Nigeria, exploring key applications such as precision agriculture, climate forecasting, pest and disease prediction, crop modelling, and supply chain optimisation. Drawing on global and local case studies, the study highlights successes, constraints, and socio-economic implications of AI adoption among smallholder farmers. The research identifies critical challenges hindering AI deployment, including limited data infrastructure, digital literacy gaps, policy and regulatory limitations, and high technology costs. Through qualitative synthesis and policy analysis, the paper proposes a framework for scaling AI innovations in Nigeria's agricultural sector, emphasising multi-stakeholder partnerships, capacity building, investment in digital infrastructure, and supportive policies that bridge public and private efforts. The findings underscore that AI — when integrated responsibly with indigenous knowledge and climate resilience strategies — can significantly contribute to sustainable agricultural intensification, poverty reduction, and national food security goals. This paper concludes with recommendations for research, policy, and practice to advance climate-smart agriculture through AI in Nigeria.
Keywords: Artificial intelligence, Climate-smart agriculture, Economic development, Food security, Sustainable agriculture.

014. Development of a Reinforcement Learning Model for Optimising Bed Allocation and Resource Management in Hospital Environments: A Framework

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Abstract

Effective allocation of healthcare resources, particularly hospital beds and ward types, remains a critical challenge for healthcare organisations, especially during periods of high demand. Hospitals often struggle to reconcile limited capacity with urgent medical needs, with significant implications for patient outcomes, resource utilisation, and operational costs. Equitable distribution of hospital resources is central to healthcare administration and essential for advancing public health objectives, sustaining economic productivity, and promoting social well-being. Addressing these challenges requires a paradigm shift toward advanced, data-driven methodologies. In response, this study introduces a novel framework that leverages reinforcement learning (RL) to optimise hospital bed allocation and resource management. By integrating RL into healthcare operations, the framework demonstrates how technology-enabled systems can enhance decision-making processes, thereby improving the quality of patient care, hospital capacity management, and overall operational efficiency.
Keywords: Reinforcement learning, Healthcare system, Resource allocation, Hospital bed demand, Patient outcome, Optimisation.

015. Artificial Intelligence and Electoral Process in Nigeria: Opportunities and Challenges

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Abstract
This paper deliberates, studies, and analyses the relationship between the Electoral Process and Artificial Intelligence, with particular focus on the intersection in the Nigerian context. Electoral Process refers to all activities involved in conducting an election and selecting representatives in a democratic society. These activities include constituting an electoral commission, drafting an electoral act, establishing an electoral register, and periodically reviewing the register, among others. The Independent National Electoral Commission's integration of Artificial Intelligence (AI) into Nigerian electoral processes in May 2025 has the potential to positively influence and revolutionise the conduct of elections in the country. The level of electoral malpractices and fraud in the country necessitates this work. The 2023 elections, for instance, have been alleged to be massively characterised by electoral manipulation and rigging. Certain factors prevalent in Nigeria pose challenges to enhancing efficiency, transparency, and voter engagement. The researcher explores the applications of AI in conducting electoral processes, including voter registration, voter verification, election prediction, and result analysis. This paper examines the benefits of AI, including improved accuracy, greater accessibility, and reduced electoral fraud. However, the researcher also discussed the challenges and risks associated with AI in the Nigerian context, including bias, cybersecurity threats, and the need for transparency and accountability, all of which are lacking in Nigeria's political culture. This work recommends the need for a balanced approach to harness and make the best use of the benefits and the potentials of AI in electoral processes in Nigeria, while ensuring the integrity and trustworthiness of democratic institutions such as the Judiciary, electoral tribunals, INEC, SIEC, NGOs, Arms of government, Pressure groups, among others.
Keywords: Artificial intelligence, Electoral process, Technological revolution, Nigeria.

016. Risk Management and ESG Banking

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Abstract
Sustainability and ESG banking focus on environmental, social, and governance factors in financial services, promoting responsible banking practices. Environmental Green financing, climate risk management, Social Financial inclusion, social impact, Ethical banking governance, transparency, Sustainable Finance Products for sustainability goals, ESG Integration, Assessing ESG risks and opportunities. Risk Management, Identifying ESG risks. Reputation-enhancing sustainability reputation. Compliance: Meeting regulatory ESG standards; Innovation: New sustainable products; Customer Demand: Meeting ESG preferences; ESG Investing: Growing ESG-focused investments; Regulatory Focus: ESG regulations increasing; Green Finance: Growth in green bonds and loans. Social Impact: Focus on financial inclusion, Transparency, ESG

reporting and disclosure. Data Availability: ESG data challenges; Regulatory Complexity: Adhering to ESG rules; Greenwashing Risks: Ensuring authenticity; Impact Measurement: Measuring ESG impact; Awareness: Educating stakeholders. ESG Banking: Integrating environmental, social, and governance factors; Sustainable Finance for sustainability goals. It was observed that Environmental Green financing and risk management enhance economic growth. It was recommended that individuals, corporate bodies and the government should encourage Sustainability and ESG banking, focusing on environmental, social, and governance factors in financial services.

Keywords: ESG banking, Economic growth, Environmental green financing, Risk management, Sustainability

017. Artificial Intelligence (AI) and Financial Well-Being

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Abstract

This paper carefully examines the relationship between artificial intelligence and financial well-being. The period covered is from 2014 to 2024, and ordinary least squares was used for data estimation. Artificial intelligence is an advanced technology that mimics human intelligence. AI transforms financial services, enhancing financial well-being through personalised solutions and improved efficiency. AI in Finance, AI technologies for financial services, Financial Well-being, Individual financial stability and satisfaction, Machine Learning AI for data analysis and predictions. Financial technology innovations. Robo-Advisors: AI-driven investment advice, Predictive Analytics: Forecasting financial trends, Personalised Finance: Tailored financial services, Financial Inclusion: Access to financial services, Digital Payments: Transactions via digital channels, Financial Literacy: Understanding financial concepts. It was observed that AI plays a major role in financial well-being. It was recommended that the government, corporate bodies and individuals should utilise AI for their financial well-being.

Keywords: Artificial intelligence, Banking and finance, Financial well-being, Fintech, Neural Networks

018. Artificial Intelligence (AI) Integration in Nigeria's Education Sector: Examining the Relationship between State Capacity and Market Dynamics

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Abstract

As AI begins to play a larger role in global education, the path it takes within a nation is often shaped by the coordination between government policy and private sector activity. This study explores the integration of AI within Nigeria's education system, focusing on how institutional frameworks and market forces interact to influence the quality and reach of these technologies. The study is grounded in Peter Evans' Theory of Embedded Autonomy, which suggests that

effective development occurs when a state maintains both the independent authority to set goals (autonomy) and the practical connections to the sectors it oversees (embeddedness). Through a qualitative analysis of secondary data, the study observes that while the Nigerian state has established a clear policy vision for a digital future, the practical rollout of AI tools is currently led by market dynamics. Because digital infrastructure and funding are concentrated in specific areas, the benefits of AI are appearing more rapidly in certain institutional settings than in others. This suggests that the trajectory of AI in Nigerian education is currently shaped by private-sector initiatives aimed at addressing existing institutional gaps. The study concludes that achieving a balanced and sustainable AI landscape requires a closer alignment between state regulatory frameworks and market activities. It suggests that by enhancing the state's role in providing foundational digital infrastructure and fostering inclusive governance, Nigeria can ensure that AI integration supports broad educational goals.
Keywords: Artificial intelligence (AI), Digital governance, Educational equity, Embedded autonomy, State capacity

019. Application of Energy Efficiency Strategies in the Design of a Shopping Mall in Minna, Niger State, Nigeria

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Abstract

Shopping malls are among the most energy-intensive commercial buildings, particularly in hot-dry climates, where maintaining thermal comfort often requires extensive mechanical cooling and artificial lighting. In Minna, Niger State, Nigeria, the design and operation of shopping centres contribute significantly to energy demand, yet the integration of energy efficiency strategies remains limited. This study investigates awareness, application, and potential for energy-efficient design in shopping malls in Minna, aiming to identify strategies that reduce energy consumption while enhancing environmental performance and user comfort. A mixed-methods research design was employed, combining surveys of 80 professionals, case studies of four major shopping centres, and direct field observations. Data were analysed using descriptive statistics and thematic interpretation. The results indicate that professional awareness of energy-efficient design strategies is high (93.3%), but actual implementation in shopping malls is inconsistent, constrained by cost factors, policy gaps, and client preferences. Respondents strongly endorsed the early integration of passive cooling systems, natural ventilation, renewable energy technologies, and stakeholder collaboration. The study also found that proper architectural planning can significantly reduce HVAC loads in hot-dry climates. It is concluded that the technical expertise, climatic potential, and professional readiness for energy efficiency already exist in Minna; however, stronger policy enforcement, capacity building, and economic incentives are needed to translate these into widespread practice. The study recommends mandatory performance-based building codes, the promotion of renewable energy adoption, and the enhanced use of high-quality local materials to achieve sustainable, climate-responsive shopping mall designs that support Nigeria’s broader energy conservation and climate resilience goals.
Keywords: Shopping centres, Energy efficiency, Design strategies, Technology

020. Students' Awareness, Perceived Benefits, and Challenges of Using Artificial Intelligence among Agricultural Education Students in Enugu State, Nigeria

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Abstract
This study investigated students' awareness, perceived benefits, and challenges of using artificial intelligence among agricultural education students in Enugu State, Nigeria. The study adopted a descriptive survey research design. Three specific purposes, research questions and related null hypotheses guided the study. The population comprised agricultural education students in tertiary institutions within Enugu State. The intact population was used for the study because of its manageable size. Data were collected using a structured questionnaire titled Students' Awareness, Perceived Benefits, and Challenges of Artificial Intelligence Questionnaire (SAPBCAIQ). The instrument was validated by experts in agricultural education and information and communication technology, and its reliability was assessed using Cronbach's alpha. Data were analysed using mean and standard deviation to answer the research questions, while the t-test was used to test the hypotheses at the 0.05 level of significance. Findings from the study revealed a low level of awareness of AI among agricultural education students, perceived benefits of AI for learning, and identified challenges, including limited access to digital infrastructure, inadequate skills, and insufficient institutional support. The study concluded that the level of awareness of AI and its benefits in agricultural education was low among agricultural education students. It was recommended, among others, that awareness creation should be intensified among agricultural education students about the benefits of AI for effective learning, that access to digital infrastructure should be enhanced, and that institutional support should be provided to facilitate the use of artificial intelligence by agricultural education students.
Keywords: Students, awareness, Artificial intelligence, Perceived benefits, Challenges, Agricultural education.

021. Social Media Use and Eating Disorder among Emerging Adults: Moderating Role of Self-Esteem

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Abstract
With the constant use of social media sites like Facebook, there is a tendency for young adults to engage in negative social comparison and subsequently develop negative behaviour like eating disorders. The explanation for these negative eating behaviours may have been scarce. This study investigated the moderating effect of self-esteem in the relationship between social media use and eating disorders among 400 undergraduates who were conveniently sampled from a southeastern University. Their ages ranged from 17 to 33 years, with a mean of 21.33 years. Participants were

administered the Multidimensional Facebook Intensity Scale, the Eating Attitude Test (EAT-26), and the Rosenberg Self-Esteem Scale. Results of the Hayes PROCESS macro revealed that social media use was positively associated with eating disorders, and self-esteem significantly moderated the relationship between Social media (Facebook) use and eating disorders, with lower and moderate self-esteem acting as a potential influence on the association between social media use and eating disorders. The findings of this study, therefore, shed light on the potential mechanisms through which social media use impacts eating disorder symptoms among young adults.
Keywords: Eating disorder, Emerging adults, Social media use, Self-esteem

022. AI-Driven Learning in Higher Education: Examining Gender Differences in Information Literacy and Research Skills Development among Economics Education Students in Federal Universities in Southeast Nigeria

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Abstract
The study examined gender differences in the influence of artificial intelligence on information literacy and research skills among students of economics education in Federal Universities in the Southeast, Nigeria. The study adopted two research questions and two hypotheses. The study employed a descriptive survey design. The study population comprised 336 third- and fourth-year Economics Education students from federal universities in Southeast Nigeria, of whom 73 were male, and 263 were female. The study used 180 third- and fourth-year Economics Education students as the sample. A simple random sampling technique was adopted. The instrument used for data collection was a structured questionnaire developed by the researcher titled "Influence of Artificial Intelligence on Information Literacy and Critical Thinking Questionnaire (AIILCTARSQ). To collect this data, the researcher used a direct administration of the questionnaire and on-the-spot collection. The data collected for the study were analysed using mean, standard deviation and t-test. The study found that AI has influenced male and female Economics Education students' information literacy as they use it to understand abstract and difficult economic concepts during research. Based on the findings, the study, among others, recommended that schools and universities seek opportunities for international collaboration among educators and researchers to identify the best mechanism for embracing AI and to ensure its ethical use, thereby improving the quality of the research process in the academic environment.
Keywords: Gender, Artificial Intelligence, Information literacy, Academic research skills, Economics, Current education

023. Fuzzy-Based Gas Leakage Detection System Using Arduino Microcomputer

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Abstract
This research examines a significant safety issue in gas leakage detection across residential, commercial, and industrial environments. Despite advancements in gas leakage detection research, numerous challenges, such as false alarms, lack of mobility, communication issues, and the need for continuous power, have constrained their adaptability and user-friendliness. To address these problems, a cost-effective system integrating a fuzzy logic framework with the Arduino microcontroller is presented to enhance the accuracy of sensor data interpretation and minimise false positives. The proposed system employs an MQ2 gas sensor linked to an Arduino microcontroller for real-time gas level monitoring, while the incorporated fuzzy logic system enhances the management of uncertainty and imprecision in the system's decision-making process. This enables the system to precisely differentiate between variations and hazardous leakage. The system's performance was tested in controlled environments and real-world settings. Results showed high precision, reliability, and efficiency in gas detection. The integration of sensors with intelligent processing on an affordable microcontroller provides a comprehensive solution for proactive, cost-effective gas safety management. This combined approach not only enhances leak detection but also helps create safer environments where gas safety is critical by delivering instant notifications via SMS and email for quick action.
Keywords: Gas Leakage, Arduino microcontroller, Fuzzy Logic System, MQ series, Sensor

024. Working-Class Men's Involvement in Domestic Chores Within Nuclear Families in North-Central Nigeria

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Abstract
The study investigated working-class men's involvement in domestic chores within nuclear families in North-Central Nigeria. The study adopted a descriptive survey research design. The study population comprised 29,157,326 individuals in North Central Nigeria. The study sample comprised 384 participants (192 urban and 192 rural dwellers), selected using a multi-stage sampling design. Data were collected using: Gender Roles Stereotypes of Working-Class Men Involvement in Domestic Chores Questionnaire (GRSWCMIDCQ). The instrument was face validated by three experts. The instrument's reliability was 0.92, as measured by Cronbach's alpha. Data were analysed using mean, standard deviation and an independent sample t-test. Findings

revealed that men commonly perform the following domestic chores: minor repairs, farming, and animal rearing, while they rarely perform cooking, sweeping, laundry, and babysitting, among others. Results also showed that men were involved in domestic chores to a low extent. Results showed that factors influencing men's involvement in domestic chores include: social roles, gender stereotyping, culture, religion, education, the nature of household chores, and the nature of the husband's occupation, among others. Based on the findings of the study, it was recommended that: Men should endeavor to assist their wives carry-out most of the domestic chores; parents and the society at large should avoid ascribing gender roles to male and female children; and, sociologist, social workers and educationists should carry-out enlightenment campaigns against gender inequalities so that men and women will see themselves as equals.

Keywords: Chores, Involvement, Men, Nuclear families, Working-Class

025. Artificial Intelligence and the Future of Human Work in Nigeria: Opportunities and Ethical Concerns

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Abstract

This research explores the opportunities and ethical concerns of Artificial Intelligence (AI) in shaping the future of human work, with particular focus on Nigeria. The study begins with an introduction that outlines the rapid adoption of AI technologies, including machine learning, robotics, and predictive analytics, and highlights their transformative impact on workplaces across sectors such as healthcare, finance, education, and manufacturing. The work enumerates the potential benefits of AI, including increased productivity, enhanced decision-making, improved service delivery, economic growth, workforce development, and the promotion of innovation and competitiveness. The study further identifies ethical and practical challenges associated with AI adoption, including job displacement, algorithmic bias, privacy violations, workplace surveillance, and unequal access to technological benefits. The research adopts a qualitative approach, relying on descriptive and analytical methods. Data were sourced from secondary materials, including books, journal articles, policy documents, and reports from international organisations. Finally, the study examines strategies to ensure responsible and inclusive AI integration, recommending policy reforms, workforce reskilling, ethical oversight, public awareness campaigns, and investments in local technological capacity.

Keywords: Artificial intelligence, Human work, Opportunities, Ethical concerns, Nigeria

026. Enhancing Basic Science Achievement among Primary School Learners: A Quasi-Experimental Study of a Simulation-Based Instructional Module

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Abstract
The study explored the impact of a simulation-based instructional module on pupils' achievement in Basic Science. A quasi-experimental design featuring a pre-test and post-test non-equivalent control groups was employed in the study, guided by two research questions and two null hypotheses. A purposive sampling method was used to select 57 Primary 5 pupils from two intact classes. Data were gathered using a 20-item Basic Science Achievement Test, which was content-validated by three experts and showed a reliability coefficient of 0.83, calculated using the Kuder-Richardson 20 formula. Descriptive statistics, including mean and standard deviation, were computed to address the research questions, while the hypotheses were tested using analysis of covariance (ANCOVA) at the 0.05 level of significance. The findings indicate that the simulation-based module significantly enhanced pupils' academic achievement in basic science. The study therefore recommends that educators incorporate simulation techniques into basic science instruction to improve learning outcomes.
Keywords: Simulation, Instructional module, Primary education, Academic achievement, Basic science

027. Artificial Intelligence-Based Educational Applications: A Correlational Study of Early Literacy Achievement among Primary School Learners

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Abstract
Early literacy development is fundamental to pupils' later academic success. Yet many learners in Nigerian public primary schools continue to demonstrate weak literacy outcomes. Thus, employing a non-experimental correlational approach, the study investigated the patterns of association between AI-supported learning tools and the early (foundational) literacy outcomes. The study population comprised all 6,242 Primary 1-3 pupils, while a sample of 147 pupils was selected using a multistage sampling technique. Two instruments, the Artificial Intelligence-Based Learning Applications Usage Questionnaire (AILAUQ) and the Early Literacy Achievement Test (ELAT), were used to collect data. Three experts validated the instruments. A reliability coefficient of 0.80 was obtained for AILAUQ, and 0.83 for ELAT. Descriptive indices were computed to determine usage patterns, while inferential statistics were used to estimate the strength of association between variables at the 0.05 level of significance. The study found moderate use of

AI-based educational apps. Again, the findings revealed that the overall early literacy achievement of the pupils was at an average level, with reading comprehension recording the lowest performance. The results further indicated a moderate but statistically significant positive relationship between the use of AI-based educational applications and early literacy achievement. The study concludes that although AI-based apps are not yet extensively used in public primary schools, their use is associated with improved early literacy outcomes. It is therefore recommended, among others, that public primary schools be equipped with suitable digital infrastructure.

Keywords: Artificial intelligence, Educational, Applications, Early literacy, Primary school

028. Perception of Behavioural Disorders amongst Parents of Children aged 1 to 12 in Ede-Oballa, Nsukka

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Abstract

This study investigated parents' perceptions of children's behavioural problems aged 1 to 12 in the Ede–Oballa Community, Nsukka. The study was guided by five specific research objectives and questions. The study employed a descriptive survey design and administered a structured questionnaire to 246 parents across the community. Using a census-style approach, a semi-structured questionnaire was distributed to eligible parents in Umualoke, Umuoho, and Amezi communities. Demographic data were analysed using frequencies and percentages, while research questions were analysed using means and standard deviations, with a decision benchmark of 2.50. Findings showed that parents demonstrated moderately high awareness of childhood behavioural problems, especially overt externalising behaviours. Parents were always aware of changes in mood (mean = 3.57), unusual behaviour (3.57), anger or aggression (3.64), difficulties following instructions (3.55), repetitive behaviours (3.56), and reactions to stress (3.54). However, awareness of internalising indicators was lower, with only sometimes noticing peer difficulties (3.05), attention problems (3.48), and overall behavioural reflections (3.47). Observed behavioural problems followed a similar pattern: parents rarely observed temper tantrums (2.38), aggression (2.42), disobedience (2.38), destructive behaviour (2.07), lying or stealing (1.86), and poor school engagement (2.27), while only hyperactivity (2.76) and poor attention (2.56) were sometimes observed. Parental attitudes were strongly influenced by cultural, moral, and spiritual beliefs. Most agreed that children naturally outgrow problem behaviours (3.40), that behaviour may be caused by spiritual forces (3.22), and that behavioural problems should be managed within the family (2.82). Parents disagreed that misbehaviour reflects poor home training (2.49) and that children with behavioural problems should be taken to professionals (2.33). Management strategies reflected a mix of positive and traditional practices. Parents sometimes used calm communication (3.30) and rewards or praise (2.88). However, they rarely consulted religious/traditional leaders (2.26) or health professionals (2.17) and often overlooked behaviours (1.95). Major barriers to seeking professional or evidence-based interventions included a preference for traditional remedies (3.14), fear of stigma (2.73), and disbelief in the effectiveness of professionals (2.84). Only the belief that behavioural problems must be handled at home was rejected (1.81). The study concludes that parents in Ede-Oballa display selective awareness, rely on corporal punishment

alongside positive strategies, and face significant informational, economic, and structural barriers to accessing evidence-based support. The study recommends community-based parental education and partnerships with faith and traditional leaders to promote early identification and effective management of children's behavioural problems.
Keywords: Behavioural problems, Disorder, Parents, Children, Perception.

029. The Effect of Different Cooking Times on the Nutrient and Phytochemical Composition of *Sarcocephalus Latifolius* (African Peach) Leaves

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Abstract

This study investigated the effect of different cooking times on the nutrient and phytochemical composition of *Sarcocephalus latifolius* (African peach) leaves. *S. latifolius* is an underutilised leafy vegetable with potential health benefits, commonly used in traditional medicine for its antimicrobial, antioxidant, and anti-inflammatory properties. The study aimed to assess how various cooking durations influence the proximate composition, vitamin content (provitamin A, vitamin C, folate), mineral content (iron, zinc, potassium), and phytochemical composition (oxalates, tannins, saponins, and phytates). Fresh leaves were collected, cleaned, chopped, and divided into five portions. Four portions were boiled at 100°C for 5, 10 and 15 minutes, while the fifth portion remained raw as the control. Standard AOAC methods (2010) were used for chemical analysis. Results revealed that cooking significantly affected the nutritional and phytochemical properties of *S. latifolius* leaves. Moisture content increased with prolonged cooking, while protein, crude fibre, and ash content decreased. Vitamin C and provitamin A showed a significant decline with increasing cooking time, while folate loss was less pronounced. Mineral content (iron, zinc, and potassium) also decreased, but the extent of the decrease varied with cooking duration. For phytochemicals, oxalate and phytate levels reduced with longer cooking times, indicating improved bioavailability of essential minerals. The findings suggest that moderate cooking times (5–10 minutes) optimise nutrient retention while reducing anti-nutritional factors, making *S. latifolius* a valuable dietary resource.
Keywords: Nutrients, Phytochemicals, *Sarcocephalus latifolius*, Underutilised Vegetables, Cooking time.

030. Algorithmic Exposure to Nutrition Content on Social Media and Its Influence on Knowledge, Attitudes, and Dietary Practices of Undergraduates of the University of Nigeria, Nsukka

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Abstract

Increased social media use in the post-COVID-19 era has intensified undergraduates' exposure to nutritional misinformation, potentially influencing their knowledge and dietary behaviours within an AI-driven digital environment. The study assessed nutritional misinformation on social media and examined the knowledge, attitudes, and dietary practices of undergraduate students at the University of Nigeria, Nsukka. A descriptive cross-sectional design was employed. Data were collected from 500 undergraduates selected through multi-stage sampling using a structured questionnaire. Data were analysed using SPSS version 23. Descriptive statistics were computed, and chi-square tests were used to determine associations at $p < 0.05$. Most respondents (97.2%) owned internet-enabled smartphones, and 46.4% spent more than six hours daily on social media platforms. Although 87.4% recognised that not all online nutrition information is accurate, and 77.6% demonstrated excellent overall knowledge, social media significantly influenced dietary practices. About 64.4% changed their diets based on online information, 57.2% tried viral diet trends, 60.0% purchased products promoted online, and 54.6% preferred homemade remedies over professional advice. A statistically significant association between knowledge level and practice by gender was observed ($\chi^2 = 7.842$, $p = 0.049$). Many respondents—regardless of gender or knowledge level- still preferred social media–sourced homemade remedies over professional advice, suggesting that dietary practices are shaped by factors beyond knowledge, such as digital influence and behavioural preferences.

Keywords: Nutritional misinformation, Social media, Dietary practices, Algorithmic exposure, Undergraduate students, Post-COVID-19 period.

031. Artificial Intelligence Technologies and Livestock Farmers in Nsukka, Enugu State

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Abstract
Artificial intelligence has been deployed by farmers worldwide to achieve sustainable agricultural practices, including pest reduction, improved soil health, and terracing. In Nigeria, AI initiatives such as “Farmcrowdy” have been used to build sustainable food solutions in Africa. However, the extent to which rural livestock farmers in Nsukka are aware of and utilise these technologies remains unclear. This study investigates the level of awareness, adoption, and potential benefits of integrating artificial intelligence technologies into livestock agricultural practices among farmers in Nsukka, as well as the challenges influencing their adoption. Twenty renowned livestock farmers within Nsukka urban were purposively selected for the study. The study employed a qualitative research design, using a reflexive thematic analysis and an interview guide as the data collection instrument. The study identified practical techniques for how AI technologies can influence livestock farming outcomes and contribute to its sustainability. The finding further highlighted inadequate technical knowledge as a major challenge affecting adoption.

Keywords: Artificial intelligence, Technology, Livestock Farmers, Nsukka

032. AI in Education: Exploring Equitable Outcomes for Diverse Learners in the School Systems in Nigeria

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Abstract
The educational sector in Nigeria over the past decade has undergone a transformation driven by technology and innovation. One of these major technologies is Artificial Intelligence (AI), which has rapidly altered the education system by creating new opportunities for personalised learning, enhanced access to information, and the chance to make it more equitable and to support a diverse student population. The major objective of this paper was to examine how AI can facilitate expected outcomes through personalised learning, accessibility tools, and data-driven learning strategies. Drawing from recent studies, the paper synthesised theoretical and empirical evidence on how AI technologies can enhance inclusive education. Although the literature establishes that AI can close the systemic educational divide, other challenges that may arise include algorithmic bias, access disparities, and data privacy concerns. To address these challenges, the paper proposed an ethical, policy-driven model for the fair integration of AI that involves collaboration among educators, tech-savvy innovators, and policymakers. Finally, it concludes that the transformative power of AI lies not only in its innovative nature but also in its ability to make education more human by aligning technology with equity, openness, and accessibility.
Keywords: Digital Inclusive education, Equity, Algorithm bias, Ethical AI, Diverse learning

033. Roles of Emotional Intelligence, Academic Self-Concept and School Type on Problematic ChatGPT Use among Undergraduate Students

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Abstract
The pervasive integration of ChatGPT into the academic landscape presents a dual reality: transformative potential and significant risks, including problematic student use. This study investigated the predictive roles of emotional intelligence, academic self-concept, and institutional type on problematic ChatGPT use among undergraduates in Nigeria. Using a cross-sectional research design, 324 students from Michael Okpara University of Agriculture and Ogbonnaya Onu Polytechnic (both in Abia State) volunteered for the study. Participants completed standardised measures of emotional intelligence, academic self-concept, and problematic ChatGPT engagement. The data were analysed using a three-way ANOVA and the results identified emotional intelligence as a statistically significant predictor, with lower levels associated with greater problematic artificial intelligence use {$F(1, 323) = 17.47, p < .001$}. In contrast, academic self-concept and school type were not significant {$F(1, 323) = .09, p > .05$} and {$F(1, 323) = .26, p > .05$}. These findings underscore the critical importance of emotional intelligence as a

psychological resource for fostering a self-regulated and responsible use of the artificial intelligence technology ChatGPT. It is recommended that tertiary institutions consider incorporating emotional intelligence development into support frameworks to mitigate the risks of dependency and promote healthier academic adaptation to technological advancements.

Keywords: Artificial intelligence, Emotional intelligence, ChatGPT, Academic self-concept, Undergraduates

034. Impacts of Artificial Intelligence (AI)Tool and Gender on Problem-Solving Ability among Undergraduates

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Abstract

This study investigated problem-solving ability by manipulating the AI tool and gender among undergraduates. Eighty (80) undergraduate students (40 males and 40 females) aged 18-28 years (M= 23.5 years) participated in the study. "Figgerits" was used to measure problem-solving ability (the total number of puzzles the participants were able to solve accurately. Two-way analysis of variance (ANOVA) revealed a significant main effect of the AI tool on problem-solving ability {$F(1, 79) = 4.21$, $p < .05$}. There was no significant effect of level of study on problem-solving ability {$F(3, 79) = 2.03$, $p>.05$}. Also, no interaction effects of the AI tool and gender on problem-solving were revealed. The findings have implications for the educational sector, including the use of AI chatbots as supplementary tools to enhance students' problem-solving ability and self-efficacy. Some limitations of the study included participants' unfamiliarity with the AI tool and the instrument's time-bound nature. Suggestions for further research included extended exposure to AI tools to help participants become more familiar with the technology, and a larger sample size and flexible time frames to enable deeper engagement.

Keywords: Artificial intelligence, Chatbots, Problem solving, Self-efficacy, Gender, Figgerits

035. Comparative Study of AI-Generated Nutritional Advice and Conventional Nutrition Education among Communities in Benue State, Nigeria

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Abstract

Artificial intelligence (AI) is increasingly applied in health promotion and nutrition counselling due to its ability to provide rapid, personalised dietary recommendations. However, its effectiveness compared with conventional nutrition education in community settings remains unclear. This study compared AI-generated nutrition advice with conventional nutrition education among residents of Makurdi, Gboko, and Otukpo in Benue State, Nigeria. A quasi-experimental

design was used involving 300 adults recruited from government hospitals (out-patient departments), markets, and churches in the three towns. In each town, participants were divided into two groups: an AI-generated nutrition advice group and a conventional nutrition education group. Baseline information on nutrition knowledge, dietary diversity, and eating behaviour was collected using structured questionnaires and a 24-hour dietary recall. The intervention lasted for eight weeks. Participants in the AI group received personalised dietary guidance generated by an AI-based nutrition advisory system, while those in the conventional group received nutrition education through community health talks and printed materials. Data were analysed using descriptive statistics, paired t-tests, and analysis of variance at $p < 0.05$. Results showed that the AI group recorded greater improvements in nutrition knowledge (30–34%), dietary diversity (25–29%), and adherence to healthy eating recommendations (22–27%) compared with the conventional education group, which showed improvements of 16–20% and 12–18%, respectively. These findings suggest that AI-generated personalised nutrition advice can enhance engagement and dietary compliance compared with traditional education approaches. However, some limitations were noted in areas requiring professional judgement and micronutrient precision. The study concludes that AI-based nutrition guidance can effectively complement conventional nutrition education when integrated with professional oversight.

Keywords: Artificial intelligence, Nutrition education, Dietary behaviour, Personalised nutrition, Benue State.

036. *In Vitro* Lipase Analysis of Beeswax Caplets Containing *Azadirachta Indica* Ethanol Extract for the Treatment of Malaria

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Abstract

Azadirachta indica has been proven to have anti-malarial properties *in vitro*. However, its leaf extract has poor aqueous solubility, resulting in reduced bioavailability when taken orally. This research aimed to improve the in vivo bioavailability of Azadirachta indica leaf extract using Lipid-Based Drug Delivery Systems (LBDDS) by formulating and evaluating lipid-based caplets for the treatment of malaria. The formulation process for *Azadirachta indica* lipid-based caplets involved combining Beeswax and Phospholipon 90®H in a 2:1 ratio to form a lipid matrix by the fusion method. The lipid matrix and Poloxamer® 188 were utilised at specific quantities, and visual characterisation, weight uniformity, and content uniformity of the caplets were assessed. *In vitro* drug release studies were conducted, and the effect of lipase on both lipid-based caplets and pure Azadirachta indica ethanol extract was also determined. The *Azadirachta indica* caplets were tiny and rectangular, with a greenish-black colour, a slightly bitter taste, and a characteristic scent. The weight uniformity test showed that the caplets had a percentage deviation ranging from -3.78% to 3.09%, confirming that the caplet batch weight fell within acceptable BP weight standards. The content uniformity test revealed the drug content for the three caplets to be 106.68%, 100%, and 92.86%, which falls within the USP standard for drug content uniformity (85–115%). *In vitro* drug release studies revealed significant findings for both the caplets and pure *Azadirachta indica* ethanol extract in different media. The caplets exhibited a drug release percentage concentration of 50.71% in Simulated Intestinal Fluid (SIF) and 69.28% in Simulated Gastric Fluid (SGF) after

6 hours. In 1000IU/ml lipase in SIF and 50IU/ml in SGF media, percentage concentrations of 92.85% and 79.28% were recorded after 8 hours. Similarly, the pure *Azadirachta indica* ethanol extract displayed lower release, with concentrations of 29.03% in SIF and 18.14% in SGF after 6 hours, and 87.11% and 50.21% after 8 hours in 1000 IU/ml lipase in SIF and 50 IU/ml in SGF media, respectively. A noteworthy observation was the improved drug-release pattern from the caplets across all media compared with the pure *Azadirachta indica* ethanol extract. This enhanced performance can be attributed to the incorporation of Lipid-Based Drug Delivery Systems (LBDDS) into the caplet formulation, which significantly improved the bioavailability of *Azadirachta indica*. It was also observed that the caplets had the highest drug release in SIF medium containing 1000 IU/mL lipase. However, it is essential to emphasise the need for conducting further research to thoroughly explore these findings and identify ways to enhance the delivery of *Azadirachta indica* ethanol extract for more effective therapeutic applications.

Keywords: Malaria, Lipid-based drug delivery systems, Quality Control.

037. Sensory and Nutrient Analysis of Biscuits Made from Tropical Almond (*Terminalia catappa*) Seed Flour and Wheat Flour Blend

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Abstract

Wheat flour is a major ingredient in the production of pastries such as biscuits; however, it has a relatively low nutrient profile and incorporating nutritionally dense alternative flours could improve the nutritional quality of baked products. Tropical almond (*Terminalia catappa*) seed flour is nutrient-rich, locally available, but underutilised, and may serve as a suitable substitute for wheat flour. This study employed a quasi-experimental design to evaluate the nutritional profiles of biscuit samples produced from tropical almond-wheat flour blends. Four composite flour formulations were prepared: 80% almond seed flour:20% wheat flour (Blend A), 70% almond seed flour:30% wheat flour (Blend B), 60% almond seed flour:40% wheat flour (Blend C), and 50% almond seed flour:50% wheat flour (Blend D). All samples underwent sensory evaluation, and the most accepted sample was further analysed for proximate composition, anti-nutrients, vitamins, and minerals, and compared with 100% wheat flour (Control). Results indicated biscuits containing 70% tropical almond flour and 30% wheat flour (Blend B) recorded the highest overall sensory acceptability, with favourable scores for taste (7.20 ± 1.21), flavour (7.23 ± 1.19), and texture (7.23 ± 1.41). Blend B also exhibited higher protein content (31.15 ± 0.07) and lower carbohydrate content than the control (28.40 ± 0.00). Additionally, Blend B contained higher levels of most vitamins, minerals, and anti-nutritional factors, except magnesium, which was higher in the control sample (265.65 ± 6.15). The findings indicate that tropical almond seed flour can be successfully incorporated into biscuit production to enhance nutritional quality while maintaining consumer acceptability.

Keywords: Flour, Almond seeds, Biscuit formulation, Composite flour, Proximate composition

038. Effective Interventions on Word Decoding and Reading Fluency of Dyslexic Children: An Empirical Review

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Abstract
Developmental dyslexia is characterised by persistent difficulties in accurate and/or fluent word recognition and decoding, despite adequate intelligence and educational opportunity. Word decoding and reading fluency deficits significantly impede academic achievement and long-term educational outcomes. This empirical review synthesises controlled research examining the effectiveness of interventions on word decoding and oral reading fluency in children with dyslexia. Results consistently demonstrate that explicit, systematic phonics and structured literacy programmes significantly improve decoding proficiency. However, gains in reading fluency require extended practice and repeated reading. Implications for practice, policy, and future research directions are also discussed.
Keywords: Developmental dyslexia; Effective intervention; Oral reading frequency; Word decoding; School-aged children

039. Impacts of Artificial Intelligence Photo Editing Usage, Body Consciousness, Media Portrayed Ideal Body Image on Self-Esteem Among Undergraduate Netizens

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Abstract
This study investigated the impacts of artificial intelligence (AI) photo editing usage, body consciousness, and media-ported ideal body image on self-esteem among undergraduate social media users. 120 participants drawn from nine faculties in the university of Nigeria, Nsukka, Enugu state took part in the study: they comprised of 60 males (50%) and 60 females (50%), aged 17-26 years (mean =21.86; SD =1.87) and were assessed using the Body Consciousness Questionnaire, Multimedia Media Influence Questionnaire, Rosenberg Self-Esteem and Artificial Intelligence Photo Editing Attitude Scales. Using a mixed-methods design and Hierarchical Multiple Regression to analyse the data, the results revealed that artificial-intelligence photo editing and media portrayals of an ideal body image did not affect self-esteem, whereas body consciousness was significantly and positively associated with self-esteem. Encouraging acceptance of diverse body types and appearances can help mitigate the negative effects of unrealistic beauty ideals and reduce reliance on edited images for self-esteem validation.
Key Words: Artificial intelligence, Photo editing usage, Body consciousness, Ideal body image, Self-esteem.

040. Economic Effects of Artificial Intelligence (AI) -Driven Mechanisation on Farm Labour in Nigeria's Agricultural Sector: A Conceptual Review

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Abstract
The study highlights the economic effects of AI-driven mechanisation on farm labour in Nigeria's agricultural sector. The study provides an overview of AI-driven mechanisation in the Nigerian agricultural sector, key AI mechanisation technologies in Nigeria and their applications, the economic effects of AI on farm labour, and the challenges to the use of AI-driven mechanisation in the Nigerian agricultural sector. Artificial Intelligence (AI) is poised to transform farming by reducing labour needs while increasing food production. As AI automation progresses, it is expected to gradually replace human labour, particularly on farms, where robots and autonomous machines will manage operations and utilise predictive analytics for decision-making. The adoption of new technology and mechanisation in agriculture can significantly enhance food production. However, it warns that implementing AI might lead to challenges, such as unemployment among unskilled labourers. Additionally, inadequate connectivity in rural areas could hinder the effectiveness of AI. Recommendations include improving connectivity and infrastructure, training extension personnel on AI, and making agriculture more appealing to youth, especially graduates.
Keywords: Artificial intelligence, Mechanisation, Farm labour, Agricultural sector

041. Human-AI Collaboration and Work-Life Balance: Rethinking Ethical Usage and Optimisation of ChatGPT in Academic Writing

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Abstract
The rapid diffusion of artificial intelligence (AI) tools in higher education has significantly transformed knowledge production, academic writing practices, and scholarly communication. Among these tools, ChatGPT has emerged as one of the most widely used generative AI systems assisting researchers and lecturers in tasks such as literature exploration, drafting, editing, and conceptual development. While this transformation offers opportunities for improved productivity, creativity, and efficiency in academic writing, it also raises critical ethical questions about authorship integrity, academic honesty, intellectual ownership, and the evolving boundaries of human-machine collaboration. This paper, therefore, examines the intersection of human-AI collaboration and work-life balance in academic environments, with particular focus on the ethical optimisation of ChatGPT in scholarly writing. Adopting a conceptual and analytical approach grounded in the literature on AI governance, digital ethics, and knowledge work, and anchored in the Technology Acceptance Model (TAM), the paper interrogates how generative AI tools can reshape academic labour, cognitive workload, and time management among scholars. The paper

argues that the responsible integration of AI writing assistants can enhance scholarly productivity and reduce excessive cognitive and temporal burdens often associated with academic publishing, thereby improving work-life balance. It, however, stresses that unregulated use risks undermining academic integrity, reinforcing epistemic biases embedded in AI training data, and creating new forms of digital dependency. This paper proposes an ethical framework for human-AI collaboration in academic writing built on four pillars- transparency in AI-assisted writing, preservation of human intellectual agency, accountability in knowledge production, and institutional guidelines for responsible AI use. By repositioning generative AI as a collaborative augmentation tool rather than a substitute for human scholarship, the paper highlights pathways for academia to optimise AI use while safeguarding ethical standards.

Keywords: Human-AI collaboration, ChatGPT, Academic writing ethics, Work-life balance in academia, Responsible artificial intelligence use

042. Harnessing Artificial Intelligence (AI) Technologies for Social Innovation in Textile Waste Management in Benue State

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Abstract

This study investigated the use of AI technology for social innovation in textile waste management. The goals were to examine the possibilities that artificial intelligence offers for reducing textile waste and to uncover AI technologies utilised in Harnessing Social Innovation in Textile waste Management. and the obstacles that prevent the use of AI-driven solutions in the management of textile waste. The study was guided by three research questions. The population was 735, comprising textile designers, ICT workers, instructors, and students at Benue State Fashion School. A survey design was used, and the sample size of 120 was selected for the study using the Taro Yamane method. The data were analysed using mean and standard deviation. Findings identify Machine Learning (2.5), Computer Vision (3.2), Robotics and Intelligent Automation (2.7), among others, as AI technologies for managing textile waste. AI also offers significant opportunities in optimising pattern drafting, with the cluster mean of (2.97) indicating a positive perception toward the role of AI in textile waste management. Major challenges identified include the high cost of AI systems and a lack of technical expertise, among others, with the cluster mean (3.2). The study concludes that AI technologies hold great promise in addressing the persistent problem of textile waste. When applied responsibly, it will support recycling and foster social innovation in the textile sector. The study recommended that the government and stakeholders should subsidise AI technologies to make them affordable to small and medium textile enterprises.

Keywords: Artificial intelligence, Technologies, Textile waste, Waste management, Social innovation.

043. AI-Powered Instructional Materials for Effective Teaching of a Vocational Subject in Nsukka Primary Schools

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Abstract
This study investigated the role of AI-powered instructional materials for effective teaching and learning of Home Economics in Nsukka primary schools. Specifically, the study assessed the availability and integration of AI tools, their use to enhance engagement and skill acquisition, the factors affecting their effective use, and strategies for improvement. The study adopted a survey research design and was carried out in Nsukka local government, involving all 98 Home Economics teachers in government-owned primary schools. Data was collected using a structured questionnaire titled AI-Powered Instructional Materials and Effective Teaching of Home Economics Questionnaire (AI-PIMETHE), validated by two experts in Home Economics and Hospitality Management Education. Data were analysed using mean and standard deviation with a benchmark of 2.50. Findings revealed a low level of AI tool availability and integration ($\bar{x}$ = 2.02), with school management support being the only item rated positively ($\bar{x}$ = 2.56). Despite limited use, AI tools were perceived as highly effective in improving understanding ($\bar{x}$ = 3.27) and skill development ($\bar{x}$ = 3.93), among other areas. Inadequate training ($\bar{x}$=3.51), poor internet connectivity ($\bar{x}$=3.47), among others, were identified as major constraints. Strategies such as curriculum planning ($\bar{x}$=3.48), regular training ($\bar{x}$=3.41), and funding allocation ($\bar{x}$=3.36), among others, were strongly endorsed to improve AI-supported teaching. The study concludes that AI-powered instructional materials have significant potential to enhance learning outcomes in Home Economics, but their effectiveness is dependent on adequate infrastructure, teacher competence, and policy support. Recommendations include strengthening training, infrastructure, curriculum integration, and administrative support to optimise AI utilisation.
Keywords: AI-powered instructional material, Effective teaching, Home Economics, Primary Schools, Vocational learning

044. Social Disconnection and Online Immersion: A Correlational Study of Internet Gaming Disorder and Loneliness among Adolescents in Enugu Metropolis

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Abstract
In an era where artificial intelligence–driven algorithms are designed to maximise user engagement, the boundary between digital recreation and problematic use has become increasingly

blurred. As online games adapt to users' emotions and behaviours, many adolescents are forming social connections in virtual environments rather than through face-to-face interactions. This study examined the relationship between loneliness and Internet Gaming Disorder (IGD) among secondary school adolescents in Enugu Metropolis. Guided by four objectives, the study adopted a correlational cross-sectional survey design. Using Taro Yamane's formula, a sample of 427 respondents was drawn from a population of 16,500 through a multistage sampling procedure. Data were collected using a structured, self-administered questionnaire comprising the UCLA Loneliness Scale (Version 3), the Internet Gaming Disorder Scale–Short Form (IGDS9-SF), and items assessing socio-demographic characteristics and coping strategies. Data were analysed using frequencies, percentages, means, standard deviations, and chi-square tests. Results showed that 68.1% of respondents experienced moderate to high loneliness, with a mean loneliness score of 48.7, while 56.9% exhibited symptoms consistent with IGD. At the 0.05 level of significance, a strong positive association was found between loneliness and IGD. Adolescents with high loneliness were nearly five times more likely to report moderate to severe IGD. Although many adolescents recognised the value of social support and alternative activities, structured coping strategies were seldom used. The study concludes that loneliness is a significant risk factor for IGD and recommends collaborative efforts by schools and parents to regulate gaming time and promote offline activities.
Keywords: Problematic online gaming, Loneliness, Adolescents, Social isolation, Artificial intelligence

045. Impact of Artificial Intelligence Adoption on Learning Outcomes of Business Education Students in Public Universities in Enugu State

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Abstract
This study investigated the Impact of Artificial Intelligence (AI) on Business Education Student's Learning Outcomes in Public Universities in Enugu state, Nigeria. A descriptive survey research design was adopted for the study. The population comprised 370 business education students from public universities in Enugu State. A sample of 150 students was selected using simple random sampling to ensure equal representation. Data were collected using a structured questionnaire designed to assess AI adoption levels and their impact on students' learning outcomes. The instrument underwent face validation by experts, and its reliability was established before administration. The collected data were analysed using SPSS version 29. Descriptive statistics comprising mean and standard deviation were used to analyse respondents' responses to research questions, while a t-test was used to test the hypothesis at a 0.05 level of significance. The findings revealed that adaptive learning platforms enhanced student engagement and personalised learning, while intelligent tutoring systems improved problem-solving abilities and comprehension of complex concepts. Based on the findings, the study concludes that AI significantly improves learning outcomes in the Business Education Programme when effectively integrated. It was therefore recommended that universities should encourage the integration of AI-based learning tools and provide adequate training for both lecturers and students to maximise the benefits of AI in education.

Keywords: Artificial intelligence, Business education programme, Adaptive learning, Intelligent tutoring systems

046. Parents and Teachers' Perception of the Role of Digital Media Consumption and Household Environment on School-aged Children's School Readiness in Enugu North Urban

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Abstract

In Nigeria, particularly in urban and semi-urban areas such as Enugu North Local Government Area, the increasing integration of digital media into children's lives calls for closer examination of its influence on school readiness alongside household environmental factors. This study examined parents' and teachers' perceptions of how digital media consumption and the home environment shape the school readiness of school-aged children. Guided by four objectives, a cross-sectional descriptive survey design was employed. A total of 385 parents and teachers from selected primary schools were studied using a multi-stage sampling technique. Data were collected through a structured questionnaire and analysed using frequencies, percentages, means, standard deviations, and t-tests. Findings indicated that respondents perceived notable negative effects of digital media use, including reduced attention span (M = 3.53), weakened interpersonal skills (M = 3.06), and impaired fine motor development (M = 3.10). However, positive outcomes such as improved academic knowledge (M = 3.14) and enhanced technological skills (M = 3.31) were also acknowledged. The household environment was viewed as a critical determinant of school readiness, with vocabulary-rich interactions (M = 3.54), a supportive emotional climate (M = 3.48), and access to learning resources (M = 3.47) rated highly. Challenges in regulating digital media included limited parental time (M = 3.45), widespread device access (M = 3.20), and low awareness of screen-time guidelines (M = 3.15). A significant difference was observed between parents' and teachers' perceptions of electronic media's influence ($p = 0.012$), but not regarding the influence of the home environment. The study concludes that both electronic media and the home environment have dual effects on school readiness and recommends media-balance workshops for parents.

Keywords: Digital media consumption, School readiness, Home environment, Parental and teacher perceptions, School-aged children

047. A Sociotechnical Systems Perspective on How Algorithmic Socialisation Influences Young People's Agency

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Abstract
Digital platforms supported by advanced computational systems that now carry out crucial tasks typically performed by human socialisation agents are increasingly influencing the social and psychological development of today's youth. This review paper examines the mechanisms by which recommender systems, predictive analytics, and automated content curation affect the values, norms, identities, and behavioural trajectories of teenagers and emerging adults, framing this as algorithmic socialisation. The paper, which draws on Sociotechnical Systems (STS) theory, conceptualises youth development as the result of dynamic interactions between a social subsystem comprising peer relationships, family contexts, cultural norms, and individual developmental needs, and a technical subsystem comprising machine learning models, data infrastructures, and platform affordances. The analysis reveals a growing tension between young people's autonomy during identity development and algorithms that regulate content. The concept of algorithmic foreclosure, which refers to the premature narrowing of identity exploration through repeated, optimisation-driven content exposure, is introduced in the paper to capture this dynamic. The review also identifies persistent forms of youth agency, such as deliberate manipulation or avoidance of platform feeds, algorithmic resistance, and strategic management of digital footprints. The paper makes the case for a reorientation of digital platform governance toward Value Sensitive Design (VSD) and participatory approaches that centre young people as stakeholders by synthesising recent empirical and theoretical literature. For algorithmic environments to support, rather than impede, young people's autonomous development and identity formation in digitally mediated societies, cooperative optimisation between social and technical systems is crucial.
Keywords: Algorithmic socialisation, Human agency, Sociotechnical systems, Identity formation

048. Relationship Between Dietary Patterns and Mental Health of Undergraduates in the University of Nigeria, Nsukka

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Abstract
The growing burden of mental health challenges among university students has intensified the need for data-driven and preventive approaches to well-being. This study examined the relationship between dietary patterns and mental health among undergraduate students at the University of Nigeria, Nsukka. A descriptive cross-sectional survey design was adopted, involving

380 students selected through systematic random sampling. Data were collected using structured questionnaires, including the Eating Habits and Dietary Behaviour Questionnaire, Depression Anxiety Stress Scales (DASS-13), and General Health Questionnaire (GHQ-12), and analysed using IBM SPSS (version 25.0). Descriptive statistics and chi-square tests were employed. Findings revealed that 76.1% of respondents had healthy dietary patterns, while 23.9% exhibited unhealthy patterns. Mental health status showed that 48.9% were flourishing, 41.9% moderate, and 8.8% languishing. A significant relationship was observed between dietary patterns and mental health ($p = 0.028$), with healthier diets associated with better mental health outcomes. The identified barriers to healthy eating include financial constraints (3.39), irregular class schedules (3.29), stress and academic pressure (3.08), lack of time (2.99), preference for fast food (2.59) and limited access to healthy food (2.32). The study concludes that dietary patterns contribute significantly to the mental health of undergraduate students. It was recommended that the university, government agencies, and relevant stakeholders should enhance students' access to affordable healthy foods, provide nutrition education programmes, and offer stress-management and lifestyle-support interventions to promote student well-being.

Keywords: Dietary pattern, Mental health, Undergraduates, Well-being, Undergraduates

049. Delineating the Aptness of Improved Geomaterial Strength for Ground Improvement through Microstructure and Cluster Analysis

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Abstract

In this study, a sustainable technology using geopolymer synthesised from industrial waste materials was adopted to treat black clay soil for use in a geotechnical application, such as slope stability. A robust experimental design was applied, considering precursor type, precursor percentage (P_C), liquid activator type (L_T), activator–to–precursor ratio, and method of preparation (M) as the process factors for determining unconfined compressive strength (UCS). The results obtained following Taguchi optimisation and ANOVA revealed the most crucial factors to be LT, PC, and M. An approximately 4-fold increase in UCS was achieved and validated using a confirmatory experiment at the 90% confidence level. An R^2 value of 0.937 obtained between the experimental and predicted UCS underlines the prediction accuracy. The predicted values from the full factorial space for the developed soil geopolymers were used to classify them for reliability in a geotechnical application, using a minimum strength of 200kPa via hierarchical cluster analysis (HCA). A novel Taguchi hierarchical cluster standardisation procedure was implemented to execute the HCA, integrating geopolymer factors and their levels. The approach was found to be efficient at grouping the data, achieving high intra-cluster similarity. Moreover, HCA delineated the appropriateness of the developed soil geopolymers and complemented/validated the ANOVA and Taguchi optimisation results for factor effects. The microlevel changes in the geopolymer-treated soil were delineated through mineralogical identification, morphological and elemental analyses. The geopolymer soil treatment is superior to lime treatment based on the outcome of the microlevel analyses

Keywords: Black clay geopolymer, Hierarchical cluster analysis, Ground improvement, Industrial waste, Taguchi optimisation.

050. 'Spare the Rod and Spoil the Child': Reading Selected Biblical Proverbs in the Light of Corporal Punishment in Child Upbringing

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Abstract
Corporal punishment is highly prevalent in domestic settings. A significant number of parents believe that the book of Proverbs endorses corporal punishment as an integral part of child discipline. Proponents of corporal punishment usually base their stand on Proverbs 13:24 and also on the age-old English maxim 'Spare the rod and spoil the child'. Other biblical proverbs they hold firmly are Proverbs 22:15 and Proverbs 23:13–14. Because of the use of the term 'rod', some studies equally maintain that the selected texts support the physical discipline of children. In contrast, others argue that 'rod' is a metaphor for discipline, encompassing teaching, guidance and correction. Using the historical-literary method of exegesis, this article examines these texts to understand the historical and cultural context in which the proverbs were written, to explore their varying interpretations, and to illuminate the value of discipline for children's well-being and character formation, and to clarify various perspectives on corporal punishment in child discipline. This study finds that positive discipline, which focuses on guidance, encouragement, positive reinforcement, verbal warnings, time-outs, explaining consequences (et cetera), promotes healthy behaviour and development in children, whereas corporal punishment is of limited effectiveness and can have unintended long-term negative effects on a child's physical, emotional and psychological well-being. Therefore, rather than relying on spanking, parents should embrace positive discipline techniques. If positive discipline methods prove abortive, parents should seek professional support to find out the underlying reasons behind a child's recalcitrant behaviour.
Keywords: Biblical Proverbs, Child upbringing, Corporal punishment, Positive discipline

051. An AI-Based Computer Vision Framework to Minimise Post-Consumer Textile Waste in Small-Scale Artisanal Hubs

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Abstract
The world textile sector produces about 92 million tons of waste every year, but less than 12% of that waste is recycled through mechanised processes, and less than 1% is recycled into clothing of similar quality. This crisis is aggravated in small-scale artisanal centres, where everyday production offcuts become economic liabilities that cannot be sorted by hand because they were not economic core concerns. This paper formulates and experimentally tests a Precision Upcycling architecture, an artificial intelligence-based computer vision system that identifies and sorts textile waste, as well as models and produces redesigns, in clusters of artisanal workshops. The ResNet-50 Convolutional Neural Network (CNN) (trained on 500 high-resolution images of locally harvested scraps (Ankara, Adire, and synthetic blends) via transfer learning) distinguished textile

waste by its fibre composition, weave density, and colour profile. This was followed by a heuristic, generative nesting algorithm to suggest the best cutting patterns with maximum material usage. Using a mixed-methods methodology, laboratory prototyping with a four-week artisanal cluster pilot (n=27), the study indicates a CNN classification accuracy of 92.3% and a rise in the Material Utilisation Ratio (MUR) from 64.2% (manual) to 86.1% (AI-assisted), a net 21.9%-point decrease in waste. This classification accuracy of 92.3% and a 21.9%-point decrease in waste material represent a net reduction in waste. The time spent on artisan decision-making was reduced by 53.1%. More importantly, the ethical aspects of the framework, the digital equity, cultural information sovereignty, and the risk of displacement, are methodically analysed in a framework, and the study is at the border of innovation and accountability. The results affirm that, when implemented as Augmented Intelligence, AI gives power, not replaces, traditional artisans, and turns environmental liabilities into economic and cultural assets in line with SDG 12.
Keywords: Artificial intelligence, Textile waste, Sustainable fashion, Computer vision, Social innovation.

052. Intolerance of Uncertainty and Eco-anxiety: A Systematic Literature Review (2001-2005)

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Abstract
This systematic review examines the relationship between intolerance of uncertainty (IU) and eco-anxiety. In line with the PRISMA 2020 guidelines, a search was conducted across 4 databases: Google Scholar, PubMed, arXiv, and Scopus for empirical research published between 2021 and 2025. The search yielded 179 unique records, which were screened based on their abstracts. Seven primary empirical studies met the inclusion criteria. Evidence from these studies demonstrates a positive association between IU and eco-anxiety, with Positive IU playing an important role, as it is characterised by proactive information seeking. In contrast, inhibitory IU leads to paralysis and appears more peripheral. Intolerance of Uncertainty also plays a mediation role in the relationship between eco-anxiety and mental well-being. Using the ROBINS-1 assessment to evaluate risk of bias, the results indicated a moderate overall risk of bias across all included studies, particularly due to the cross-sectional nature of the data, which limits causal inference. Limited geographical diversity, absence of longitudinal designs, and reliance on convenience samples were identified as significant gaps in the literature. Future research should prioritise prospective studies to establish temporal precedence and examine intervention targets for reducing maladaptive climate-related distress.
Keywords: Intolerance of uncertainty, Eco-anxiety, Systematic reviews, Mental well-being

053. Perceived Impact of Social Media on Peer Relationships, Body Image Concern and Social Well-Being on Adolescents in Nsukka Urban

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Abstract
This research investigated the perceived impact of social media use on peer relationships, body image concerns, and social well-being among adolescents in Nsukka Urban, Enugu State. Adolescence is a critical developmental period marked by significant physical, cognitive, and socio-emotional transitions, during which individuals are increasingly influenced by digital interactions. The study employed a descriptive cross-sectional survey design, utilising four modified questionnaires to collect data from a sample of 265 adolescents aged 13 to 19. Data were analysed using frequencies, percentages, mean scores, and Pearson correlation coefficients via SPSS version 27.0. Findings revealed that adolescents are highly active social media users, primarily utilising WhatsApp, Facebook, and Instagram for 1–4 hours daily to watch videos, share photos, and follow influencers. Results indicated that social media use has a moderate positive correlation with peer relationships ($r = 0.265$, $p < 0.01$), enhancing connectivity despite friendships often lacking emotional depth. Conversely, a strong positive correlation was found between social media use and body image concerns ($r = 0.482$, $p < 0.01$), with many respondents reporting high levels of body dissatisfaction and pressure to imitate online ideals. Additionally, social media use showed a small negative correlation with social well-being ($r = -0.198$, $p < 0.01$), linked to increased feelings of loneliness and social comparison. The study concludes that while social media facilitates interaction, it poses significant psychosocial risks. Recommendations include promoting media literacy and responsible digital habits through collaborative efforts between parents, educators, and policymakers.
Keywords: Social media, Peer relationships, Body image, Social well-being, Adolescents

054. Effect of Food Processing Methods on Nutritive Value of Agricultural Food Products and their Health Implications: An Artificial Intelligence-Driven Review

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Abstract
Food is one of the basic needs of man for healthy living. The nutritive value of food is almost always altered by the processing method it undergoes before consumption. Each food processing method has varying influences on different food ingredients and food groups. The nutritive value of processed or cooked foods is important to both consumers and food manufacturers, but obtaining precise information is a major challenge due to the inherent variation in composition across food products derived from a given raw ingredient. Analytical methods are too costly to scale, while retention-factor-based methods are scalable but

approximate. The emergence of artificial intelligence (AI) and machine learning (ML) technologies is instrumental in addressing the challenges posed by variability in food processing methods and their effects on nutrient quality. This review highlights the applications of AI and ML in evaluating the effect of food processing methods on the nutritional value of agricultural food products. For this review, a systematic and thorough literature search was conducted across three prominent academic databases: Web of Science, Scopus, and Google Scholar. The health implications of food processing methods are discussed to provide guidance to consumers and manufacturers on appropriate nutritional information for healthy food choices and nutrition labelling.

Keywords: Food processing methods, Nutritive value, Agricultural food products, Health implications, Artificial intelligence.

055. Nutritional Knowledge and Factors Influencing Birth Spacing Among Married Women in Amorji-Nike, Enugu State, Nigeria

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Abstract

This study examined the nutritional knowledge and factors influencing birth spacing among married women in Amorji-Nike, Enugu State, Nigeria. The timing and spacing of births have emerged as core interests among researchers, who have examined whether the intervals between pregnancies affect both maternal health and a child's growth, development, and survival (ACOG, 2019). This study intends to fill this gap by assessing nutritional knowledge and other factors influencing birth spacing among married women in Amorji-Nike, Enugu. The study was designed to determine the level of nutritional knowledge among married women, assess their knowledge of birth spacing, and identify personal, family, and community-related factors influencing birth spacing practices. A descriptive survey design was adopted for the study. The population consisted of 307 married women with two or more living children in Amorji-Nike, and a multi-stage sampling technique was employed to select 174 respondents. The study was guided by four research questions. Instruments for data collection included a self-structured questionnaire used to assess the socio-demographic characteristics, knowledge of nutrition and birth spacing, personal factors influencing birth spacing, and family and environmental factors influencing birth spacing among married women in Amorji-Nike. The structured questionnaire was validated by three lecturers from the Department of Home Science and Management. The data obtained were analysed using IBM SPSS version 23.0. Descriptive statistics (frequencies and percentages) were presented in tables. The results revealed that most respondents had limited knowledge of birth spacing: only 46% were aware of the concept, and 43.7% acknowledged that nutrition plays a role in healthy birth spacing. The study further showed that personal factors, such as age at marriage (75.7%) and number of children (66.1%), community-related factors, such as the availability of healthcare facilities, and family factors, such as educational level and income, influenced birth spacing decisions. Additionally, cultural beliefs and limited awareness of family planning services contributed to short birth intervals among women in the study area.

Keywords: Nutrition knowledge, Maternal mortality, Morbidity, Birth spacing, Married women

056. Role of Artificial Intelligence in Family Resource Management Skills of Housewives in Enugu Urban

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Abstract
The study examined the role of Artificial Intelligence in enhancing the family resource management skills of housewives in Enugu Urban. The study adopted a survey research design. The study population consisted of 280,000 housewives residing in Enugu Urban. A sample of respondents was selected using a multistage sampling technique. Data for the study were collected using a structured questionnaire and analysed using the mean. The study found that Artificial Intelligence plays a significant role in improving housewives' family resource management skills through better budgeting, meal planning, and household organisation. The study also found that although awareness of AI exists, utilisation among housewives remains moderate due to limited digital literacy and the cost of some AI devices. It was therefore recommended that awareness programs and training on the use of AI technologies be promoted to effectively enable housewives to utilise AI Tools in Enugu Urban.
Keywords: Artificial intelligence, Family resource management, Housewives, Home Management, Enugu Urban.

057. Artificial Intelligence and Early Childhood Development (ages 0-6): Exploring the Benefits, Risks and Ethical Consequences

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Abstract
It is an undisputable fact that Artificial Intelligence (AI) is around us and fundamentally transforming all aspects of our daily lives. In spite of evidence on the rapid benefits of AI in different sectors in society, like health, industry, education and so on, there is still limited research on the impact of AI on early childhood development (ages 0-6). Early childhood is often a critical period for an individual's cognitive, emotional, and behavioural development. Therefore, understanding how AI-integrated environments reshape these formative years is essential. Data were collected using a qualitative approach based on secondary sources such as journal articles, policy briefs, books and internet sources. Findings indicate that while artificial intelligence offers many benefits for children in their early development, such as effective learning, creativity, problem-solving, and the acquisition of social skills, it also poses significant risks. However, over-reliance on AI may hinder natural social interactions, and unrestricted internet use can expose children to digital safety threats. This paper concludes by recommending a balanced approach that

integrates technology use with conventional learning. It further emphasises the vital role of parental and educator guidance on the use of AI technologies by children as one of the vital ways to mitigate the negative impacts of AI on the developing child, which extends to the family and society.
Keywords: Early childhood development, Artificial intelligence, AI ethics, Social development, Formative years

058. Perceived Role of Artificial Intelligence in Enhancing Household Food Security in Nsukka Local Government Area, Enugu State

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Abstract
This study determined the perceived role of artificial intelligence (AI) in enhancing household food security in Nsukka Local Government Area of Enugu State, Nigeria. Specifically, the study examined the perceived role of AI in improving food availability, accessibility, and utilisation among households. A descriptive survey research design was adopted for the study. The population comprised household heads, Agricultural Education, and Home Economics Education Lecturers in Nsukka LGA, from which a representative sample was selected using a multistage sampling technique. Data were collected using a structured questionnaire validated by experts in agricultural education and extension, and reliability was assessed using Cronbach's alpha. Mean and standard deviation were used to answer the research questions. Findings revealed that respondents perceived AI as playing a significant role in enhancing food availability through improved agricultural productivity, precision farming, weather forecasting, and pest and disease control; AI enhances food accessibility by facilitating efficient food distribution systems, market price prediction, and improved logistics and supply chain management; and enhance food utilisation by promoting nutrition awareness, food safety monitoring, and improved storage and processing techniques. Based on the findings, it was concluded that artificial intelligence has strong potential to enhance household food security in Nsukka LGA across the dimensions of availability, accessibility, and utilisation. The study recommended, among others, that government and relevant stakeholders should promote the adoption of AI-driven agricultural technologies among farmers, provide training and capacity-building programmes, and invest in digital infrastructure to support AI integration in food systems.
Keywords: Artificial intelligence, Food security, Households, Food availability, Food utilisation, Food accessibility

059. Utilisation of Artificial Intelligence for Enhancing Pre-Service Home Economics Teachers' Instructional Effectiveness in Home Economics in Abia State

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Abstract

This study examined the utilisation of artificial intelligence for enhancing pre-service Home Economics teachers' instructional effectiveness in Home Economics in Abia State. The study adopted a descriptive survey research design. The population comprised pre-service teachers in Home Economics in selected tertiary institutions in Abia State, while 49 respondents participated in the study. The instrument used was the Utilisation of Artificial Intelligence for Enhancing Pre-Service Teachers' Instructional Effectiveness Questionnaire (UAIEPTIEQ). The instrument was face- and content-validated by three experts, and its reliability was established using the test–retest method, which yielded a Pearson Product-Moment Correlation Coefficient of 0.88. The collected data were analysed using frequency, percentage, mean, standard deviation, and a t-test. The findings revealed that pre-service teachers utilised various artificial intelligence tools, including ChatGPT, Grammarly, Google Gemini, AI-powered presentation tools, AI-powered search tools, AI-based video creation tools, and AI tutoring/chatbot tools, in Home Economics instruction. The study further showed that artificial intelligence tools were utilised to a considerable extent for lesson preparation, idea generation, development of instructional materials, learner engagement, and assessment. The findings also indicated that the utilisation of artificial intelligence positively influenced the instructional effectiveness of pre-service teachers by improving lesson preparation, content presentation, creativity, communication, learner engagement, confidence, time management, and assessment practices. Based on findings, the study concluded that artificial intelligence is a valuable instructional resource for improving the teaching effectiveness of pre-service teachers in Home Economics. It was recommended, among others, that teacher education institutions should strengthen AI training, provide access to digital facilities, and promote the pedagogical integration of AI in Home Economics teacher preparation programmes.

Keywords: Artificial intelligence, Pre-Service Teachers, Home Economics, Technology, School

060. Lecturers' Perception of the Integration of Artificial Intelligence in the Instructional Delivery of Vocational Education in the Federal Colleges of Education in South East, Nigeria

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Abstract
Technology is fast revolutionising diverse fields of human endeavour. Education, one such field, has also embraced diverse technology-based learning devices, with artificial intelligence being the latest. Artificial intelligence, which refers to a set of technologies that are designed to mimic human intelligence, is the central focus of this work. Based on this, this paper examined the perceptions of Vocational Education lecturers on the integration of Artificial Intelligence in the instructional delivery of Vocational Education in Federal Colleges of Education in Southeast Nigeria. The study adopted a descriptive survey design, from which 128 lecturers from the 3 federal colleges of Education in South-East Nigeria constituted the study population. A sample size of 100 lecturers was drawn using a multi-stage sampling technique. Data was collected using a structured questionnaire validated by 3 experts. Mean, standard deviation and percentages were used to analyse the research questions. The study's findings showed, among other things, that AI is beneficial for the instructional delivery of Vocational Education. It was recommended that the lecturers should be trained and updated on the use of relevant AI tools in this 21st-century technology-driven world.
Keywords: Artificial intelligence, Vocational education, Instructional delivery, Perception.

061. Identity Fusion and Self-Regulation as Predictors of Condom Use among University Freshmen: The moderating Role of Religiosity

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Abstract
Condom use is an important aspect of sexual health as it reduces the risk of sexually transmitted diseases and unintended pregnancies, yet a variety of individual and contextual factors influence its use in early adulthood. This study investigated the moderating role of religiosity in the relationship between identity fusion, self-regulation, and condom use among university freshmen. Four hundred participants (Males 118 (28.5%) and Females 282 (70.5%) aged 18 to 25 years were drawn from the University of Nigeria, Nsukka, using a convenience sampling technique. Four instruments, namely the Multidimensional Condom Attitude Scale (MCAS), Self-Regulation Scale (SRS), Verbal Fusion Scale (IFS), and Centrality of Religiosity Scale (CRS), were used to collect data. Hayes PROCESS Macro for SPSS was used to test the study hypotheses. The results showed that identity fusion was not significantly associated with condom use, while self-regulation ($\beta = .17$, $p < .001$) and religiosity ($\beta = .06$, $p < .001$) were significantly and positively associated

with condom use among university freshmen. Religiosity was found to moderate the relationship between identity fusion and condom use and also between self-regulation and condom use, such that all levels of religiosity had higher odds of condom use. These findings suggest that the influence of identity fusion on condom use is context-dependent, varying across levels of religiosity, and they highlight the role of emotional factors in shaping healthy sexual behaviours among university freshmen. They further underscore the importance of incorporating religious beliefs and practices into efforts aimed at promoting safe sexual practices in this population.
Keywords: Identity fusion, Self-regulation, Religiosity, Condom use, Freshmen.

062. Family Functioning and Resilience among Children with Sensory Disabilities: Moderated Mediation of Achievement Motivation in Special Interests across perceived Social Acceptance Levels

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Abstract

The family system influences the development of individuals, including adaptive functioning such as resilience. Resilience is crucial for children with sensory disabilities to thrive amidst daily challenges. It is pertinent to understand the factors that promote resilience. This study therefore examined the role of achievement motivation in special interests as a mediating mechanism linking family functioning to resilience, while perceived social acceptance served as a moderator of the direct relationship. A cross-section of 98 children with sensory disabilities (blindness and/or deafness) aged 6 to 12 years, selected through purposive sampling, participated in the study. Data were obtained using standardised questionnaires, and Hayes's PROCESS macro, version 5.0, model 5, was used for data analyses. The results showed that more functional family systems are associated with higher achievement motivation, which, in turn, significantly mediates the effect on resilience. The direct effect of family functioning on resilience was moderated by high levels of social acceptance. In conclusion, family functioning enhances resilience through achievement motivation, and the direct effect of family functioning on resilience is contingent on social acceptance. Interventions for children with sensory disabilities to enhance resilience should focus on improving family functioning.

Keywords: Sensory disabilities, Children, Resilience, Family functioning, Social acceptance, Achievement motivation

063. Proximate Composition, Functional Properties and Acceptability of Swallow made from Unripe Banana Flour (*Musa Paradisiaca*)

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Abstract
This study evaluated the sensory characteristics, nutrient composition and functional properties of fuufuu made from unripe banana flour. The study adopted an experimental design. The raw materials were purchased from a local market in Nsukka. The raw material was thoroughly processed; washed, peeled, chopped, soaked, dried, ground, packaged and prepared into fuufuu. They were subjected to sensory evaluation by 30 panellists. Chemical and functional analysis was carried out using standard procedures and was compared with the control, which was fuufuu made from unripe plantain flour. Data collected were analysed using the Statistical Product for Service Solution (SPSS) version 23. Descriptive statistics, such as the mean and standard deviation, were used to present the results. Moisture, ash, protein, and crude fibre contents of the most acceptable sample, which is fufu made from unripe banana flour, were higher than the control, with the values;8.08%, 2.99%, 3.40%, and 4.86%, respectively, except for the carbohydrate value,79.86%, which is lower than the control. The mineral composition of the most acceptable sample showed that Sodium (21.90mg), Calcium (97.21mg), Zinc (0.55mg), and Iron (7.38mg) were higher than in the control. The Vitamin composition of the most acceptable sample showed that beta carotene (72.15mg), Vitamin C (8.35mg), Vitamin B3 (3.15mg), and Vitamin B6 (0.60mg) were higher than in the control. The phytochemical contents of the most acceptable sample were flavonoid (1.05%) and carotenoid (56.55%). Were higher than the control except for the alkaloid (1.30%). The functional properties of the most acceptable sample showed water absorption capacity (90.70g/g), oil absorption capacity (118.40g/g), emulsion capacity (2.85%) and swelling capacity (4.65%). The study concluded that using unripe banana flour in making swallow increased its nutritional content and reduced its carbohydrate content. This work recommends that incorporating unripe banana flour into the production of baked goods, snacks, and other meals would help mitigate malnutrition and serve as a better alternative for people who need to consume less carbohydrate.
Keywords: Unripe banana, Fufu, Chemical contents, Functional properties, Sensory evaluation

064. Prevalence and Awareness of Postpartum Depression among Nursing Mothers (20-49 Years) in Benue State, Nigeria

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Abstract
The study investigated the prevalence and awareness of postpartum depression (PPD) among nursing mothers in Benue State, Nigeria, using a cross-sectional research design. A multi-stage

sampling technique was employed to select 2080 nursing mothers with infants aged 0-12 months attending postnatal care services at the 916 primary health care centres in Benue State. Data on respondents' sociodemographic characteristics and awareness of PPD were collected using a content-validated, structured questionnaire and the Edinburgh Postnatal Depression Scale (EPDS). The awareness data were analysed descriptively and classified into good awareness and poor awareness based on responses to the PPD-related awareness questions. The prevalence rate was arrived at by taking the proportion of nursing mothers who had PPD out of the total number screened. The reliability of the questionnaire was determined using a Cronbach's alpha (0.7414) after a pilot study at the Primary Healthcare Centre, Lafia East, Nasarawa State. Data collected were analysed using the Statistical Package for the Social Sciences (SPSS) version 20.0 and presented as frequencies, percentages, means, and chi-square values. The study found 32.53% prevalence of PPD among the nursing mothers and a low level of awareness of PPD. The awareness of PPD was significantly($p<0.05$) associated with age ($X^2 = 351.416$), marital status ($X^2 = 3565.962$), educational qualification ($X^2 = 389.442$), personal monthly income ($X^2 = 523.585$), household monthly income ($X^2 = 96.288$), number of children ($X^2 = 939.774$) and type of residence ($X^2 = 181.306$). The study concluded that PPD is shaped by critical socio-demographic influences. Socio-demographic factors should be given top priority in creating policies to reduce PPD, and a multifaceted, culturally relevant health education campaign should be mounted and carried out across multiple platforms to raise awareness of PPD.

Keywords: Postpartum depression, Prevalence, Awareness, Social-demographic characteristics, Nursing mothers

065. A Structural Analysis of the Determinants of Consumer Preference for Cow Skin (Ponmo) in Nigerian Cuisine

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Abstract

The consumption of cow skin (ponmo) in Nigerian cuisine is closely linked to cultural norms and traditions, but it also poses public health risks, nutritional ambiguity, sustainability trade-offs, and food security challenges. This study conducted a systematic review of recent literature (2022–2025) to examine the structural drivers shaping consumer preferences for ponmo in Nigeria. The paper develops a conceptual framework using Food Systems Theory and the Health Belief Model (HBM) to link structural conditions to behavioural outcomes. The findings reveal that while ponmo serves as an affordable dietary alternative amid rising food prices, it poses significant public health risks due to unsafe processing practices and contamination. It offers limited nutritional value relative to conventional protein sources, and its widespread consumption undermines sustainable resource allocation, especially in the leather industry. The study identifies critical policy and regulatory gaps, including weak food safety enforcement and fragmented livestock value chains. It concludes that consumer preferences for ponmo are structurally conditioned beyond individual consumption choices, shaped by norms and traditions, and that interventions require a multi-sectoral approach.

Keywords: Ponmo, consumer preference, food systems, public health, sustainability, Nigerian cuisine

066. Algorithmic Care in Nigerian Homes: Household Parenting Practices and Child Development in the Context of Artificial Intelligence — A Comparative Survey of Parents and Secondary School Students in Oyo State

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Abstract
The rapid diffusion of artificial intelligence (AI) into domestic environments is reshaping parenting practices and influencing child development trajectories. Situated within Home Economics and family systems scholarship, this study investigates the nature and implications of AI integration in Nigerian households, focusing on Oyo State. Specifically, the research examines how AI-enabled tools—such as intelligent tutoring applications, algorithm-driven content platforms, and digital assistants—are incorporated into parenting practices and how these technologies relate to students' developmental outcomes. A descriptive cross-sectional comparative survey design was adopted. Data were collected from 300 respondents comprising 150 parents and 150 secondary school students drawn from urban and rural communities in Oyo State through structured questionnaires. Descriptive statistics, independent-samples t-tests, and correlation analyses were employed to examine patterns of AI exposure, perceived developmental benefits, ethical concerns, and urban–rural differences. Preliminary findings indicate increasing AI penetration in urban households, particularly for academic support and digital engagement. While parents largely perceive AI as enhancing academic performance and access to information, students report mixed experiences, including improved learning efficiency alongside concerns about distraction and reduced face-to-face interaction. Significant perception gaps emerged between parents and students regarding AI's influence on socio-emotional development. The study contributes empirical evidence to the discourse on AI as a social innovation within family ecosystems, highlighting both developmental opportunities and ethical dilemmas. It underscores the need for context-sensitive guidelines to ensure that AI adoption in Nigerian homes supports holistic child development rather than undermining relational and emotional well-being.
Keywords: Artificial intelligence, Child development, Parenting practices, Urban–rural differences, Ethical dilemmas