# Kabarak University International Conference on Emerging Trends and Issues in Education

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# **Book of Abstracts**

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## Faith and Education / 2

## Impact of Family Structure and Family Change in Child Outcome: A case Study of Undergraduate Students of Kabarak University

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## I. Abstract

Students in the universities and tertiary institutions manifest damning consequences of a dysfunctional family structure and family change. Family is a very important unit of the society and requires effort to build it. Parents who succeed the rewards are great; but for the parents who have children but fail to rear them to be healthy, happy and self reliant the penalties are anxiety, frustration, friction, and perhaps shame, may be severe. Therefore, a research was conducted at Kabarak University among first year undergraduate students who joint the university in September 2016 to ascertain the impact of family structure and family change on the students' lives. The study was guided by the social learning theory by Albert Bandura. The study was undertaken in Kabarak University. It adopted a descriptive survey research design. The target population was 1222 first year undergraduate students who were admitted in September 2016. A sample of 310 respondents aged 17-24 years were selected through simple random sampling derived from the undergraduate first year students. The data was collected through questionnaire. Data analysis encompassed descriptive and statistical method. The study revealed that family structure and family change impacts a great deal on the child outcomes, students who engage in unhealthy behaviors like those who engage in alcohol & drugs (10%), socioeconomic challenges (25.2%), emotional disturbances (29.2%), medical related issues i.e. ulcers and blood pressure (12%), academic and career issues (10%). The study is important such that it yields data and information on the impact of family structure and family change on child outcomes. The study recommends that parents should be more proactive in the way they bring up their children right from birth until they become adults and mature enough to make their own life decisions.

Key words: Family structure, family change, parenting style, child outcome

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## Can Church Conflict Inhibit Moral Development and Christian Formation? A Study of Emmanuel Kengeleni Parish of Mombasa Diocese in the Anglican Church of Kenya (2000-2010).

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Abstract: The study set out to examine the impact of church conflict on moral development and Christian formation with a special reference to Emmanuel Kengeleni Parish of Mombasa Diocese in the Anglican Church of Kenya (ACK) between 2000 -2010. For acquisition of data, the study used qualitative methodology. The study found that the conflict had enormous effects on the church and society both spiritually and socio-economically. As an opportunity, the conflict became a source of church growth, expansion and Christian maturity whereas on the other hand it became associated with retarded development, rivalry, strained relations and negative publicity. The study recommends that church leaders be trained on conflict resolution and that churches ought to provide avenues and structures of proactive conflict resolution mechanism in order to remain the beckon of moral development and Christian formation in the society.

Key words: Conflict, Moral development, Christian formation, Freretown.

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# PREVALENCE, PERCEPTION AND CONSEQUENCES OF SEXUAL HARASSMENT IN KENYAN INSTITUTIONS OF HIGHER LEARN-ING

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The issue of sexual harassment in academia is increasingly becoming the centre of discussion. Indeed in most educational institutions, sexual harassment and gender-based violence have become an issue of research and discussion. More and more students are currently joining institutions of higher learning, many of which are not sufficiently equipped to handle sexual harassment on campus. Kenyan universities are a good sample representative of the larger society because their students are drawn from a cross-section of all communities. Exploring their pedagogical practices may, therefore, offer valuable insights into the broader understanding of how they play a meaningful role in empowering young Kenyans by promoting a harassment-free environment. However, the bulk of existing research has examined sexual harassment in non-academic settings, and only recently have social scientists begun treating sexual harassment in the academic setting as an important area of inquiry. Although several recent studies have established sexual harassment to be pervasive in learning institutions, little is known about the frequency, severity and types of sexual harassment occurring in specific educational institutions. This paper explores students' attitude and consequences of sexual harassment on campus. It also looks into the general perception that students have concerning harassment. In a cross-sectional survey, 389 respondents filled a questionnaire on sexual harassment. Quantitative statistical analysis revealed that sexual harassment was significantly prevalent in academia. Two-thirds of university students are subjected to sexual harassment before they join campus. Many of the respondents acceded to have been subjected to sexually harassing behaviours but were resistant to label themselves as survivors of harassment. The perception was high among undergraduate students. Recommendations for the improvement of the situation to create a freer and safer campus environment as well as suggestions for further research are made.

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## Social Media Neologisms; Made in Kenya for Kenyans: A case Study of Facebook

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This study investigated the use of Kenyan generated neologisms in the social media. This study was informed by the fact that human language is a dynamic and an ever-changing phenomenon only stable in performing its communicative function. The researcher conducted a survey of Facebook, one of the most common social networking sites in Kenya, where people from all walks of life engage one another on a litany of issues touching on their lives be they personal, social, economic or even political. Facebook was chosen specifically as it has a wider outreach than all the other social networking channels. The researcher purposely sampled 50 neologisms of Kenyan origin in Facebook and thereafter using a descriptive qualitative data analysis approach made a description of the word formation processes involved in their generation. This study was able to identify and document a large number of neologisms on Facebook of Kenyan origin and laced with a local flavor. The study also made an analysis of the word formation processes involved in their generation processes involved in their creation.

a long way in illustrating the universal feature of language as a dynamic and a productive artefact at human disposal.

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## Can't pay won't pay; Struggle of Kenyan Teachers in their Quest for Better Terms and Remuneration

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The history of Kenyan teachers strikes and struggle for better pay and terms of service stretches back a long time. There have been strikes and threats looming of strikes almost each year for the last decade. The conflict begun in 1997 after the government failed to honour a collective bargaining agreement (CBA) signed with the union. Teacher unions like Kenya National Union of Teachers (KNUT) have not relented in representing teachers. The government argued that Kenyan teachers are well paid compared to others in the region. Teachers have formed groups on Facebook and WhatsApp where they share issues touching on their profession. These are most active during strikes. They are also active on Twitter. Data will be collected from these social media platforms. Can't pay won't pay Struggle of Kenyan Teachers in their Quest for Better Remunerations discusses the manner in which teachers discuss issues touching on them. They have a unique language with coded words, phrases and sentences. This jargon that the teachers use reveals their attitude towards their job and towards the insistence of the governments not to pay them. They are also unhappy about their inability to control students after corporal punishment was banned as well as stagnation due to slow promotion policy. Delocalisation also affects teachers in management level. The manner might be jocular but the recent hash tags like Teach and Go Home reveal the genesis of all the major problems facing the education sector today. Critical discourse analysis provides the theoretical framework for the study. It will be used both as a theory and a method. Descriptive survey research design and discourse historical approach (DHA) will be employed. It is hoped that the study will assist in understanding the strikes and general malaise in the education sector.

## Global Trends in Educational Management / 20

## STUDENTS' PERCEPTION OF THE TEACHING PROFESSION AS AN ANTECEDENTS OF SUSTAINABILITY IN TEACHER EDUCA-TION

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Sustainability and sustainable development, have increasingly become critical issues in teacher education and development. Since sustainable development in education is impossible without the professional competence of teachers, there has been a growing pressure for the reorientation of teacher education all over the world and Kenya in particular. However, the transformations in higher learning in Kenya have not been examined to establish the extent to which sustainability have been integrated. This paper explores students' perception of the teaching profession as an antecedents of sustainability in teacher education in Kenya. The present research was based on the socio-psychological model of sustainable behavior. Ex post facto cross sectional design was used and purposive sampling methods was used to select four institutions of higher learning in Kenya. A structured self-response questionnaire and interview schedule. Quantitative data was analyzed by use of descriptive and inferential statistics using statistical tools with the aid of the Statistical Package for Social Sciences (SPSS) version 24.0. A sample of 376 respondents filled the questionnaire, resulting in a response rate of 94%. The observed mean age was 22 years with standard deviation of 2.23. Among respondents 216(57.4%) were male while 160(42.6%) we female. Research findings indicate that high 220(59%) percentages of respondents perceived sustainability in teacher education followed by moderate 148(39%) with a combined perception levels of 98%. This presents an implication that the idea of sustainability in teacher education has great potential for future developments in the programme. These study findings presents significant implications for teacher preparation strategies for sustainable development in education. The study findings also sheds light on the state of preparedness as well as advances made in Kenyan higher education in compliance with global trends in best practices for teacher education in face of sustainable development.

#### Key words

Sustainable education; teacher preparation; higher learning; transformative pedagogy

## Global Trends in Educational Management / 21

## IMPACT OF THE FAMILY STRUCTURE ON ACADEMIC PROGRES-SION AND BEHAVIOUR OF HIGH SCHOOL STUDENTS IN SE-LECTED SECONDARY SCHOOLS IN RONGAI CONSTITUENCY IN NAKURU COUNTY.

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# .IMPACT OF THE FAMILY STRUCTURE ON ACADEMIC PROGRESSION AND BEHAVIOUR OF HIGH SCHOOL STUDENTS IN SELECTED SECONDARY SCHOOLS IN RONGAI CONSTITUENCY IN NAKURU COUNTY.

ABSTRACT

As children grow up and join education institutions their family backgrounds are known to greatly affect their adjustments to school environments and progression in their studies. How the family is formed that is the intactness has been said to greatly affect the high school completion rate of students. The student wellbeing is said to be central to their ability to achieve success in the high schools. This study seeks to assess how the family structure affects the academic progression and behavior of high school students. The targeted population for the study will be 1500 form four students in Rongai Constituency, Nakuru County. The sample size will consist of 400 students selected from high schools Rongai Constituency in Nakuru County. This will consist of 16 students each from 25 secondary schools from Rongai Constituency. Simple random and purposive sampling techniques will be used to select 400 hundred students and one counselor and one administrator per school. Quantitative data will be collected from students and counselors through questionnaires and qualitative data will be collected through conducting an interview with administrators through the use of an interview schedules. The researcher will conduct a pilot study in two urban school and two rural schools that will not be included in the study. The aim of the pilot study is to determine the internal consistency of the items in the questionnaires and interview schedule. Descriptive statistical techniques involving frequencies and percentages will be employed to analyze the data in the study. Data collected will be analyzed using statistical Packages for Social sciences version 20.0.

Application of Emerging Innovations and Technologies in Education: / 23

## TECHNOLOGICAL ADVANCES THAT HAS ENABLED MAN TO ADAPT TO THE PHYSICAL ENVIRONMENT; A HISTORICAL PER-SPECTIVE.

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Ever since man evolved, he has continously manipulated the environment for his own survival and the society at large. It should be borne in mind that through evolution, man's brain capacity has been increasing which has enabled him to invent new things. The physical environment has been crucial in man's adaptation process as it dictated what man should do and how he should live. Climate change has also been a phenomena throughout history and man had to adapt to the changing climatic conditions. With a climate change, new species emerge and older species dissapear necesitating man to explore and come up with new techniques to cope with the change. We cannot control the weather. In the 21st century one may ask why the past would bother them. Historically the past activities will shape the future activities. Therefore, to built up history one has to start with the past. The main purpose of this paper is to identify the historical technological advances which has enabled man to adapt to the physical environment.As man was therefore manipulating the environment for his survival through agricuture, hunting and gathering, clothing etc he either encountered or created problems which required to be addressed. These problems were solved through continous technological innovations. The study was based on Rick Potts theory (1996) of variability selection which stated that all organisms have some degree of adaptability in them and he has to pass through periods of environmental instability. The environmental challenges of the 21st century arise from the interaction of many diffferent human activities. The coalescence and interactions of multiple environmental problems in specific locations such as global warming, land degradations and ozone depletion, call for new research and management approaches.

Key words; Evolution, Adaptation, Manipulation, Climate change, Physical environment, Human activities

#### Global Trends in Educational Management / 24

## GENDER INEQUALITY IN ENROLMENT FOR ACCOUNTANCY PROGRAMME IN NIGERIA FEDERAL POLYTECHNICS: EMERG-ING ISSUES IN EDUCATION

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Gender inequality exists all over the world, in access to and control of vital resources, in educational, economic and political opportunities. This paper investigates gender differences in enrollment pattern for Accountancy programme in Nigeria Federal polytechnics. Data were obtained from the 2011, and 2012 editions of Annual Abstract of Statistics Published by the National Bureau of Statistics (NBS). Data were analyzed using descriptive statistical methods. Percentages were used to describe annual changes in enrolment. Sex ratio was used to quantify the gender dimension of enrolment. Result show that in all academic sessions examined, males are consistently more in enrolment than females: more females are consistently enrolled at the ND level than the HND level. This paper suggested that current efforts to-rebrand the Nigeria education system must take cognizance of the level of disparities between males and females for all programmes at the tertiary education level; and devise means of bridging the gender gap.

Keywords: Gender; Enrolment; Accountancy; Education; Inequality.

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## MULTIMODAL ANALYSIS OF POLITICAL CAMPAIGN POSTERS

## IN THE 2017 GENERAL ELECTIONS IN KENYA. A CASE OF NAKURU GUBERNATORIAL AND SENATORIAL ELECTIONS CAMPAIGNS.

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During political campaigns of all sorts and manners, candidate's posters have played significant roles in expressing identities and ideologies through visual communication in order to woo voters. The purpose of this paper is to examine the role of visual communication techniques applied by politician in theirs political campaign posters in order to influence viewers to cast votes in their favor. The study will analyse the visual representation of the posters and the slogans used by political aspirants. This paper will analyse four campaign posters of 2017 election; two posters for persons vying for the position of the governor and two posters for persons that vied for the position of the senator. The paper intends to investigate the manner in which the leaders presented themselves in the posters. It will endeavor to identify similarities and differences in their visual presentations. The observations will help to identify the main visual strategies and linguistics techniques that were used by the politicians to persuade voters. This study will be guided by the multimodal discourse analysis because it analyses political poster which are actually multimodal in the sense that they combine different modes which include text and visual elements. The study will combine content analysis and observation methods to answer the research questions. Both content analysis and observation methods will be approached qualitatively. Research instrument will include a paper based questionnaire and a focus group discussion. The findings of this study will help to determine whether visual communication in political posters influence the political view of the viewers to vote for a specific candidate.

Key terms: Political campaign, Multimodal analysis, visual communication, visual representation, Political posters

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## EFFECT OF TEACHING USING PREFERRED LEARNING STYLES ON STUDENTS' PERFORMANCE IN BIOLOGY AND GEOGRA-PHY IN SECONDARY SCHOOLS IN NAIROBI COUNTY, KENYA

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Learning styles influence students in all levels of education and a mismatch of teaching styles to preferred learning styles makes learning a stressful experience to many learners. Students in private and public secondary schools in Nairobi County have been performing unsatisfactorily in sciences in the last seven years. Literature review revealed that there is a gap of analysing the contribution of mismatching teaching styles with preferred learning styles to the performance in biology and geography in Nairobi County. The study was based on Felder learning style theory, Keirsey personality patterns theory of learning and teaching style theory by Grasha. The objective of this study was to determine the effect of traditional teaching and teaching according to preferred learning styles on students' performance, in biology and geography in secondary schools in Nairobi County. The study employed quasi-experimental research design, which utilised a pre-test, treatment of experimental group and a post-test to estimate impact of an intervention of mismatch due to traditional teaching styles to preferred leaning styles a purposive sample of 1,322 students from 18,536 Form Two Students in private and public schools randomly selected for the study. Multivariate analysis of variance (MANOVA), in general linear model (GLM) of performance of students taught according to traditional and preferred learning styles, revealed that students taught according to preferred learning styles had statistically significant higher mean scores in biology and geography (p = .000). In conclusion, this study is to sensitise teachers of the need to identify and teach their learners according to their preferred learning styles in order to enhance their performance in sciences, recommends the ministry of education science and technology in Kenya to in-service, and train teachers to acquire the skills of detecting learning style preferences of students.

Key terms: Learning styles, teaching styles, match, performance, and biology and geography

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## A Study of the Morphology of SynthesizedZnO Nanoparticles and their Application in Photodegradation of Dyes

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Environmental pollution by toxic organic contaminants is a global menace so declining water quality has become a global issue. Organic dyes produce toxic aromatic amines that are carcinogenic to human beings and harmful to the environment yet they are non-biodegradable. Nanotechnology is a promising field in waste water treatment. The aim of this study thus was to assess the use of synthesized ZnO nanoparticles in photo degradation of dyes. The basis of ZnO/UV photo-catalytic process is the semi-conduct optical stimulation of ZnO as a result of electromagnetic ray absorption. Precipitation technique was used to synthesize ZnO nanoparticles. By varying experimental conditions, two samples L1 and L2were synthesized and characterized using Power X-ray Diffraction (PXRD), Fourier Transform Infra-Red (FTIR), Scanning Electron Microscopy (SEM) and Energy Dispersive X-ray Spectroscopy (EDX) methods of analysis. The PXRD results showed diffraction peaks which were indexed to ZnO reference as per JCPIDS file 80-0075. The size of ZnO nanoparticles was found to be 26 nm. FTIR spectra showed a broad band at around 430 cm-1 with shoulder shape, characteristics of Zn-O bond. The images obtained by SEM showed rod shaped clusters of nanoparticleswere distributed well within a range of 100 nm which is a favourable property to exhibit better photo catalytic activity. The EDX results showed elemental composition of ZnO nanoparticles and showed 54% Zn, 44.07% O and 1.93% Mn impurities for L1 and 55.34% Zn, 42.3% O and 2.37%Mn impurities for L2. on the extent of photodegradation has also been investigated. The results showed that percentage removal of the dye increases with increase in contact time and amount of photocatalyst, it decreases with increase in initial dye concentration. The results revealed that dyes could be removed by semiconducting nanomaterials assisted by photocatalytic degradation.

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## JINN AS A SPIRITUAL STRONGHOLD IN SHARIA MUSLIM COUN-TRY OF SOMALIA: IMPACT OF POWERS AND PRINCIPALITIES ON MISSIONS AND CHRISTIAN RESPONSE

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Jinn's distortion is one the causes that make Somali people resistant to the Gospel in its expression, use, and understanding that presents a real conflict with the Gospel hence a stronghold which keeps people captive on a cognitive and emotional level to a distorted view of reality and the gospel message

The paper presents several ways of dealing with Jinn stronghold: transformational encounters, contextualization and power encounter that makes the said people group receptive to the Gospel.

This piece of work presents other strategies: Mobilization of Christians in the free world to pray and

fast for Somali Muslims which has resulted to Somali Muslims embrace the Christian faith through dreams and visions, setting up of workshops and trainings for the MBCBS outside Somalia on the sovereignty of Christ over Jinn stronghold. Jesus defeated and disarmed the demonic stronghold (including the world of Jinn) by means of the cross, resisted these spiritual powers and casted them out as well as delegating this authority to the disciples (Matt.28:16-20)

Electronic Media remains one of the effective tools that can be used where physical presence is not possible.

This writer proposes a research to be conducted on other strategies in reaching the Somali Muslims with the Gospel. These new areas include reaching to the Imam and Sheikhs, who are the religious gatekeepers among the Somali Muslims, mentoring and coaching of MBCBS and Social responsibility as well as conducting a discipleship program for the military personnel, especially those involved in peacekeeping in Sharia Muslim country of Somalia.

The paper concludes that Somali world of Jinn which deals with peoples' resistance to the Gospel is unmasked by removing its distortions hence creating a lesser resistant environment in doing mission work among the Somali people group.

## Issues and Challenges in Basic Education Act (2012) / 33

## THE RELATIONSHIP BETWEEN SECONDARY SCHOOL STUDENTS' ATTRIBUTES AND THEIR ATTITUDES TOWARDS AGRICULTURE SUBJECT: THE CASE OF MIGORI DISTRICT, KENYA

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Students acquire attitudes within their classrooms, in their homes and within their community. The study focused on secondary school students attributes related to their attitudes towards agriculture as a subject and as career goal of students within Migori district of Kenya. Success in the subject and decision to pursue agriculture at secondary levels could be attributed to their personal attributes. Enrolment in agriculture as a subject and as a career goal in Migori depends on positive attitudes cultivated amongst the students. The study adopted a cross-sectional survey research design. The target population consisted of all the form 4 students in Migori district who had made subject choices and had enrolled for Kenya National Examinations Council while the accessible population included the form 4 students in the 6 schools purposely selected for the study. Random sampling technique was used to select 100 form 4 students both taking and those not taking agriculture subject from both rural and urban district schools. A questionnaire with reliability coefficient of 0.85 and had both closed and open ended items was used to collect data. Data was processed and analyzed using descriptive statistics and inferential statistics to test the hypotheses. Statistical Package for Social Sciences version 17 was used for the analyses. The study found out that the attitudes of school students towards agriculture as a subject and career choice was low. It concluded that there was no evidence to show that the student attitudes were related to the attributes studied. The study recommends that parents, teachers of agriculture and universities with programs which prepare professionals for agriculturerelated careers to cooperate with secondary schools to provide information about a wide variety of agricultural careers and make visits to schools and produce high quality media which positively portray the wider range of opportunities of careers in agriculture.

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## SUPERVISION OF POSTGRADUATE STUDENTS: A PERSONAL EXPERIENCE

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Supervision can be defined as a dynamic facilitative process that encourages a set of tasks and responsibilities which are performed in different domains. In research context, supervision involves supervisors' and post graduate students 'tasks and responsibilities in the supervision process. This paper will therefore concentrate on the four pillars of strengthening post graduate supervision namely: power relations, scholarship, practices and processes involved in being a supervisor. Power relations deal with the relationship between supervisors and supervisees. It focuses on how we go about creating an inclusive and participatory learning environment that enables students to acquire and further develop knowledge, methodological skills and writing practices during the research process. Scholarship deals with the strategies used to induct students into an academic community. It also deals with supervisors' engagement with the scholarly academic community in order to develop a sense of being an effective supervisor. Practices in supervision refer to roles, responsibilities and activities of supervisors and students that enhance students' development. Supervision processes involved in being a supervisor focus on the logistics of managing supervision with institutional requirements. The supervisors' roles and students 'responsibilities and expectations will be discussed under this pillar. Couching and mentoring in supervision as well as conventional and alternative approaches to supervision will be illuminated. Challenges in supervision and possible solutions will be discussed. Recommendations on how to improve the supervision process will be provided. It is hoped that this paper will shed more light on how supervisors should go about the supervision process. As a result, it is expected that supervisors will engage in effective and meaningful supervision.

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## FOOD SECURITY IN KENYA: AGRICULTURAL SYSTEMS AND FOOD SHORTAGE ALLEVIATION STRATEGIES AMONG THE PRE-COLONIAL KIPSIGIS OF RIFT VALLEY PROVINCE

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Food security is and has been a central issue of survival and existence in the history of mankind. This is more so in Africa in the last one century when the continent has experienced major agricultural disruptions as a result of colonialism, unprecedented population increase and the subsequent pressure on land; factors agricultural technology has not been able to match as the continent undergoes a major agricultural crisis. This paper seeks to provide historical insights on food security from the Kipsigis community in the Rift Valley to underscore the importance and resilience of Indigenous Knowledge Systems in tackling hunger in the pre-colonial period. It examines the variety of agricultural systems, the diversity on food production and the dynamic food processing and storage techniques in forestalling food scarcity. It also examines the broad social mechanisms of alleviating food shortages and famines. It is demonstrated that the Kipsigis pre-colonial agricultural systems were dynamic, innovative, diverse, efficient, self-reliant and suited to the needs of the peoples involved. It is argued further that the Kipsigis agricultural organization was sound and rational and based on the people's knowledge of environment. The paper laments the loss of such indigenous knowledge systems that could substantially alleviate the current food crisis not only among the Kipsigis but in Kenya at large.

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## Birthing Fake Journalism: Problematizing Online Fake Political Analyses during 2017 Electoral Period in Kenya

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In order to predict the future of African political environment, it is significant that we make meaning of the fake journalism that disseminates propaganda that shapes the continent political contours. Since in Africa, political trajectories determine the social and economic system, it is arguably significant to pay attention to such functional political discourses. The study objective was to examine the value of fake journalism exemplified by the fake political analyses experienced in Kenya during the 2017 electoral process. Paying attention to the 2017 general elections in Kenya, the research analyzes political propaganda from fake analysts targeting the Jubilee party (for the incumbent regime) and National super alliance (NASA); (a coalition of parties forming the country's opposition). The study adopted the propaganda theory in understanding the functions of the phenomenon. The researchers sampled 14 propaganda videos uploaded on YouTube by fake analysts before, and after 2017 elections in Kenya. The videos were transcribed and then analysed using critical interpretative approach where the literature, theory, and propaganda video analyses experienced were compared and inferences drawn to make meaning of the past, present and future implications for media, politics, and society. The findings of the study indicate that fake analyses played a critical role in shaping the political contours in Kenya as they disseminated ethno-politics and all its forms and manifestations such as ethnic blocking, ethnic profiling, ethnic agenda setting, and hatred, just to mention a few. These findings are significant to the government and alternative media regulators. The study largely benefits the mainstream media who are supposed to be a voice to counter alternative media propaganda with objective journalism.

Key Terms: Fake Journalism, Fake analyses, Political Propaganda, ethno-politics

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## Modified Regression Type Estimators in the Presence of Non-Response

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It is a common experience in sample survey that data cannot always be collected for all units selected in the sample at the first attempt and even after some call-backs. An estimate obtained from such incomplete data may be misleading because of the non-response in the data. In addition, the population mean of the auxiliary variable from the previous census may not be available. In this paper, Modified regression type estimators proposed by Tum et al. (2014) in single phase sampling, assuming complete response, have been proposed to estimate the population mean of the study variable in the presence of non-response under two phase sampling scheme. The expression of mean squared errors (MSE) based on the proposed estimators have been derived under two phase sampling to the first degree of approximation. A comparison of the proposed estimators with the usual unbiased estimator and existing estimators under two phase sampling scheme have been carried out. The proposed Modified regression type estimators have been found to be the most efficient compared to the existing estimators and they are recommended for use in practice. Keywords

Modified regression type estimators, Study variable, Auxiliary variables, Mean Square Error, Non-response.

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## **Advances in Democracy**

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Abstract– Democracy is founded on the principle of elections and opinion expression capabilities. Voting is an information transfer model that requires public audit and significant amount of secrecy but cannot be transferred through trust. A cryptographic voting scheme with secure protocols is an alternative measure that can offer provable security with stronger audit trail. Trust in the correct functioning of the electronic voting system is the key to democracy. Identification and verification of voters lie in the design to accurately detect fraud and audit elections. Practical implementation on a bulletin board in a secure way is feasible provided certain deficiencies like accuracy (correctness), information theoretic privacy, universal verifiability, incoercibility (receipt-freeness) and tally is addressed using cryptographic techniques. One time signature schemes ensure one man, one vote principle that can be converted to non-interactive proofs via zero knowledge proofs in identifying voters using bit commitments for distributed computation after casting votes have been exploited to achieve this objective. In this paper, real time tabulation of results in associated race has been achieved. Simulated interfaces are in the appendix section.

## Issues and Challenges in Basic Education Act (2012) / 42

## Influence of Teacher Related Factors on Timely Coverage of KCSE Biology Syllabus in Secondary Schools in Rongai Sub-County, Kenya.

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It has been noted that timely coverage of Biology syllabus is lacking in most of the secondary schools in Kenya. The need for timely coverage of secondary school syllabi is crucial in Kenya and the world at large. The study sought to determine influence of teacher related factors on timely coverage of KCSE Biology syllabus in Secondary Schools in Rongai Sub-County, Kenya. The objective of this study is to establish influence of teacher related factors on time of coverage of KCSE Biology syllabus in Secondary Schools in Rongai Sub-County, Kenya. The study adopted survey design. The study was based in Nakuru Rongai Sub-County secondary schools. The target population of this study comprised of 174 Biology teachers across 54 schools in Rongai sub County. Moreover, census method was used to select all the Biology teachers, constituting sample size of 174 teachers. Data was obtained using a questionnaire. The findings revealed that there exist a positive and statistically significant relationship between Teacher Related Factors and Timely Coverage of Biology Syllabus (r=0.608; p<0.01). It can be concluded that, teacher related factors causes a significant positive variation on timely coverage of Biology Syllabus. Therefore these factors are central to timely coverage of Biology syllabus. They are worth considering when adequate and timely coverage of Biology syllabus is sought. From the study findings, it can be recommended that teacher related factors and specifically selection of appropriate teaching methods, teachers' workload, teacher availability and time management should be put in place by instructional administrators in order to ensure that timely coverage of Biology syllabus is achieved in schools.Keywords:\*\* Timely Coverage, Biology syllabus, Teacher-related factors.

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## Influence of Institutional Context Factors on Female Students' Career Choice in TVET Science Programmes in Technical Training Institutes in Siaya County, Kenya

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Choice of science based careers by female students in Technical and Vocational Education and Training (TVET) institutes and particularly Technical and Training Institutes(TTIs) has attracted a lot of attention of education planners, economists and administrators the world over. To that extent, numerous interventions including lowering of college entry points to favor female students have been made by the government of Kenya. In spite of such affirmative action, female students choosing careers in TVET science programmes are still few and especially in Siaya County, Kenya. The purpose of this proposed study was to determine the Influence of institutional context factors on female students' career choice in TVET science programmes in Technical Training Institutes in Siaya County, Kenya. The objective of this study is to establish the influence of institutional context factors on female students' career choice in TVET science programmes in Technical Training Institutes in Siaya County, Kenya. The study was adopted descriptive survey design. The sample size for the study was 437 female students, 121 lecturers and 327 male respondents. Census, proportionate and simple random sampling techniques was used to select respondents in different strata and TTIs. The finding of the study showed that Institutional Context Factors have a significant influence of 22.8% with negative variation on Female Students' Career Choice in Science TVET Programmes. The study recommended that institutional factors must be strengthened to enable more female students to choose careers in TVET science programmes.

Key words: Institutional Context Factors, Female Students', Career Choice, TVET Science Programmes.

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## INFLUENCE OF ROLES PLAYED BY STUDENT COUNCILS ON CURBING FREQUENCY OF STUDENT UNRESTS IN PUBLIC BOYS BOARDING SECONDARY SCHOOLS IN ELGON SUB-COUNTY, KENYA

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The purpose of this study was to assess the influence of decision-making roles played by student councils on curbing the frequency of student unrests in Public Boys Boarding Secondary Schools in Elgon Sub-county, Kenya. The study was based on Social Systems Theory. In the conceptual framework, the frequency of student unrests depends on decision making roles played by student councils. The study adopted a descriptive survey design. Census method was used to sample the three secondary schools because these are the only Public Boys Boarding Secondary Schools. Stratified sampling technique was used to sample respondents from the categories of students and members of student councils. The target population for students was 750 while that of members of student councils was 78. The study used Students' Questionnaire and Questionnaire for members of Student Councils as research instruments. Likert type items with a 4-point response scale were used to collect information. The study recommends that student councils should be thoroughly prepared for their roles through seminars, workshops. Student councils should have regular meetings with the principals. Benchmarking with good schools should be done regularly by student councils to strengthen capacity to make effective decisions

Keywords: Student Councils, Student Unrests and roles played by student council

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## Tutors' attitudes towards integration of adaptive technology devices for Visually Impaired student teachers in Primary Teacher Training Colleges in Kenya.

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Adaptive technology devices improve the quality of education and remove learning barriers for the Visually Impaired learners. This paper is a report of a study that assessed the tutors' attitudes towards integration of adaptive technology devices for Visually Impaired (VI) student teachers in the instructional process in primary Teacher Training Colleges (TTCs) in Kenya. The research question that guided this study was: What are the attitudes of tutors towards integration of adaptive technology devices for Visually Impaired student teachers in the instructional process in the primary TTCs? The study was based on the diffusion of innovation theory by Rogers which gives a basis for adoption of innovations in institutions and other settings. The study adopted a Mixed Methods research approach and a descriptive survey research design. The study population included administrators, tutors and Visually Impaired student teachers in three primary TTCs that admit student teachers with visual impairments in Kenya. Simple random sampling was used to select 93 tutors. The instruments used for data collection were questionnaires. Descriptive statistics such as frequencies and percentages were used to analyse the quantitative data. Qualitative data was analysed through a discussion of emerging themes. The findings of this study revealed among other things that, tutor training on integration of adaptive technology was lacking, and the tutors viewed integration of adaptive technology as valuable but lacking. The paper recommended for provision of adequate adaptive technology devices for VI student teachers by the government, parents, communities and donors. Tutors should be sensitized and trained on the use of adaptive technology devices. The study sheds light on the challenges influencing the integration of adaptive technology in instruction for VI students.