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## OPTIMIZING MAIZE YIELD AND ECONOMIC RETURNS THROUGH SOIL MOISTURE CONSERVATION UNDER LEGUME INTERCROP

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#### ABSTRACT

There is frequent drought pressure caused by the unpredictable and limited precipitation concurrent with global climate change, but highly efficient cultivation technologies have been increasingly recognized by various levels of scientific communities. Maize (Zea mays L.) based intercropping systems are widely practiced in Kenya, but only a few studies have focused on cowpea (Vigna unguiculata L.) as the companion intercrops. This study was conducted to assess the effect of incorporating cowpea into the maize production system on crop cover, soil moisture content (SMC), maize and cowpea yield, maize equivalent yield (MEY) and benefit: cost ratio (BCR). The experiment was randomized in a complete block design with the treatments comprising of pure maize stand (T1), maize intercropped with inoculated cowpea (T2), maize intercropped with non-inoculated cowpea (T3) and pure non-inoculated cowpea (T4). Significantly higher (82%) crop cover was exhibited at kernel development stage in T2 compared to 78, 64 and 53% in T3. T4 and T1 respectively. Similarly, the highest SMC was recorded at kernel development stage: 210.3. 209.3, 200.2 and 196.4mm in T2, T3, T4 and T1respectively. Maize yield was highest in T1 (2.80±0.12 t ha<sup>-1</sup>) compared to T2 (2.21±0.07 t ha<sup>-1</sup>) and T3 (2.17±0.11 t ha<sup>-1</sup>). MEY was higher under intercropping systems than mono-cropping system. Maize intercropped with inoculated cowpeas was the most profitable cropping system with a net income of US\$ 990.3 ha<sup>-1</sup> and a BCR of 2.02 compared to T1 (US\$ 527.9 ha<sup>-1</sup>) with a BCR of 1.13. The study showed that cowpea is a promising legume crop that could be integrated into maize cropping systems to improve moisture conservation and income without compromising maize yield. Keywords: Benefit cost ratio, Soil moisture content, Maize equivalent yield

# EFFECTS OF INTEGRATED APPLICATION OF RHIZOBIUM AND PHOSPHATIC FERTILIZER ON GROWTH, NODULATION AND YIELDS OF SOYBEAN IN MERU SOUTH KENYA

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### ABSTRACT

The cultivation of soybean is increasing in Kenya due to its widespread use in the food and feed industry. Production is, however, constrained by low soil nitrogen (N) and phosphorus (P) levels. A field trial was conducted at Chuka University Research farm to determine effects of integrated application of rhizobium and phosphatic fertilizer on growth, nodulation and yields of soybean. Treatments included three rates of Triple superphosphate fertilizer (0, 20 and 30 kg<sup>-</sup> ha<sup>-1</sup>), and three rates of rhizobia (0, 100 and 200 g ha<sup>-1</sup>) using two soybean varieties (SB19 and SB24). Each treatment combination was replicated three times in a randomized complete block design in a split plot arrangement and the experiment was repeated once. Data collected included the plant height, number of branches, number and weight of nodules, number of pods, fresh and dry shoot weight and grain yield. The data was subjected to analysis of variance using SAS statistical programme and significantly different means were separated using Tukey's Studentized range test. It was observed that rhizobia and phosphatic fertilizer had significant effect (p=0.05) on the plant height, number of nodules, fresh and dry weight of nodules and mean number of branches and pods, fresh and dry weight of shoots and weight of seed plant<sup>1</sup>. The overall means for plant heights, nodule number, fresh and dry nodule weights, number of branches and pods, fresh and dry weight of shoots and weight of seeds

plant<sup>1</sup> were 29.35 cm and 26.79 cm, 38.71 and 35.14, 0.51 and 0.38, 5.5 g and 12.54g, 49.13 and 59.18, 77.65 and 90.91, 56.99 and 69.33g, 168.9g and 148.13g for SB19 and SB24 respectively. The SB24 genotype remained significantly superior to SB19, with same treatment levels employed. From the results, it can be concluded that integrated application of rhizobia and phosphatic fertilizer (TSP) has significant effect on growth, nodulation and yield of soybean.

Keywords: Rhizobia, Triple Super Phosphate, Nodulation, Growth, Yields

# EFFECT OF SPACING AND HARVESTING STAGES ON SEED QUALITY OF JUTE MALLOW IN KENYA

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#### ABSTRACT

Use of high quality seeds increases crop yield. The appropriate stage of seed harvest helps to ensure maximum seed quality attributes of purity, germination and vigor. Fruit and seed maturity at harvest influences seed storage duration, germination and plant quality needed in market. Currently in Kenya there is no high quality seed of Jute mallow from breeders to farmers. This has seen farmers use re-cycled seed for planting whose potential is not assured contributing to low crop production and resultant poor quality seeds. Jute mallow yields has remained low, 2-4 tons/ha as compared to expected yield of 5-8 tons/ha. Observations from the Jute mallow growing areas showed that a seed rate of 7 kg/ha instead of 5 kg/ha is being used, which is required for a density of 250,000 plants/ha. The aim of this study was to determine the effect of spacing and harvesting stages on seed quality of Jute mallow phenotypes. Jute mallow seed accessions were planted at two sites namely: University of Eldoret (site 1) and Kenya Agricultural and Livestock Research Organization, Kitale (site 2). The design used was randomly complete block design, where the treatments included three spacing (20x30 cm, 30x30 cm, 40x30 cm) and seed harvesting at three maturity stages of green, tan and black pod stages with each treatment replicated three times. Data on seed purity, germination and seedling vigour was collected and analyzed as per International Seed Testing Association (2004) procedures and protocal. Results showed spacing maximized on seed quality attributes of purity at a spacing of 40 cm x 30 cm (99.8%) and lowest purity (99.5%) at a spacing of 20 cm x 30 cm by BEMS phenotype from site 2 both at Tan pod harvesting stage. On germination, the wider spacing (40 cm x 30 cm) was highest at 88.6% by GLMT phenotype at Tan pod harvesting stage from site 2. The lowest germination of 51.2% was observed with closer spacing (20 cm x 30 cm) by GEMS phenotype at black pod harvesting stage from site 1. Seed vigor was highest at 88.6% with a spacing of 40 cm x 30 cm by GLMT phenotype at Tan pod harvesting stage from site 2, while lowest vigor was 51.2% being at spacing of 20 cm x 30 cm by GEMS phenotype at black pod harvesting stage from site 1. The highest E.C. (3.5 µScm<sup>-1</sup>g<sup>-1</sup>) was recorded with a spacing of 20 cm x 30 cm by GLMT phenotype at site 1 and 3.1 µScm<sup>-1</sup>g<sup>-1</sup> at site 2 both at black pod harvesting stage. It is concluded that production of Jute mallow for seed should adopt wide spacing and harvesting be done at tan stage for high quality seed and yield. Keywords: Jute mallow, Spacing, Harvesting stage, Seed quality attributes

### IMPACT OF CLIMATE VARIABILITY ON SOCIO-ECONOMIC ACTIVITIES OF MIXED FARMERS IN EMBU EAST SUB-COUNTY, KENYA

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#### ABSTRACT

Kenya like many countries in the world is highly susceptible to climate variability and change. The economy of the people in Embu East Sub-county is highly dependent on rain fed agriculture and so a change in climate affects food production. The objective of the study was to determine the impact of climate variability on socio-economic activities of the farmers in Embu East Sub-county. The hypothesis tested was; there was no significant influence of climate variability on socio-economic activities of the farmers. The total sample comprised of 376 subjects was composed of 374 heads of farming families and 2 Agricultural Field Officers. Data was obtained through

administration of household questionnaires and interview schedule. Methods of data analysis and presentation included: frequency tables, percentages and pie charts. Student's t-test was used to obtain the significant difference between various responses. Chi-square was used to test the hypothesis. The study established that farmer's socio-economic activities were affected negatively which was evidenced by losses in crops, livestock yields and poor access to social services like the hospitals and schools.Recommendations of the study includes: upgrading the rural road network to improve accessibility, capacity building on alternative source of livelihood to the farmers, more focus on rainfall harvesting, initiating small scale irrigation schemes, and organizing field days to empower the farmers on the control measures of pest and diseases.

Keywords: Impact, Climate variability, Socio-economic, Mixed farming

# TEACHERS' PROFESSIONAL DEVELOPMENT AND STUDENTS' ACADEMIC PERFORMANCE: A CASE STUDY OF COAST GIRLS SECONDARY SCHOOL IN MOMBASA COUNTY, KENYA

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#### ABSTRACT

The Teachers Service Commission (TSC) and Ministry of Education have been advocating for teachers' professional development for the purpose of improving students' academic performance. However, there is still no conclusive studies that show how teachers' professional development impact on students' academic performance. The research study therefore was designed to investigate whether there is a relationship between teachers' professional development and students' academic performance at Coast Girls Secondary School in Mombasa County, Kenya. The study employed ex-post facto research design. The target population was 852 respondents in Coast Girls Secondary schools in Mombasa County, Kenya. A purposive sampling method was used to choose the participants. The sample comprised of 116 Form 4 Biology students and 4 Biology teachers. The biology performance in 2017 Kenya Certificate of Secondary Examination was used as a measure of students' academic performance. The descriptive statistics used were mean and standard deviation to compare students' academic performance among the classes taught by the 4 teachers. ANOVA test statistics was used to test the hypotheses in the study, while Post-hoc Tukey's HSD test was performed to show where the significance differences existed among the independent variables. The hypotheses testing was done at  $\alpha = 0.05$  level of significance. The data collected in this study was analysed using Statistical Package for Social Sciences (SPSS) computer programme version 20.0. The research findings established that there was a relationship between teachers' professional development and students' academic performance. It was therefore recommended that teachers should be encouraged to continue with professional development in order to improve students' academic performance. However, it was also noted that students' academic performance was low despite their teachers' professional development and therefore there is need for further research to investigate why students' academic performance remain low despite high level of teachers' professional development.

Keywords: Teaching experience, Content knowledge, Teaching skills, In-service training

# STAFF FACTORS INFLUENCING THE ADOPTION AND UTILIZATION OF MOBILE LEARNING TECHNOLOGIES IN CHARTERED UNIVERSITIES IN KENYA

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#### ABSTRACT

The factors influencing the adoption and utilization of mobile technologies as tools for learning in Kenyan universities have received little attention in research. The purpose of this study was to investigate how factors related to staff and Institutions influence the adoption and utilization of mobile technologies as teaching and learning tools in Kenyan universities. The target population was1988 teaching staff drawn from chartered universities drawn from Nairobi and Nyeri Counties in Kenya. A total of 199 lecturers were selected through stratified sampling. The study was a descriptive survey, and involved collecting data using questionnaires and an interview schedule. A pilot study was conducted to validate research instruments. The split-half reliability test was applied on the staff

questionnaires to obtain  $\alpha$ =0.754 and 0.70 for each half. Data was analyzed using the Statistical Package for Social Sciences version 20. Descriptive statistics provided indices such as means, mode, range, percentages, frequencies, standard deviation and variance, while inferential statistics such as regression analysis, Independent Sample t-test for Equality of Means, Analysis of Variance and Pearson Correlation provided coefficients that helped to make generalizations about the population. The study demonstrated university teaching staff had sufficient technical proficiency to use mobile devices to access the internet, send, receive electronic mails and transfer data but lacked proficiency in using the devices for their teaching duties. Further, staff related factors such age, gender; proficiency and attitude had statistically significant influence on the adoption and utilization of mobile technologies. Besides recommending that Kenya builds a prototype for a mobile based learning management system for its universities, the researcher proposed that the technical capacity for university teaching staff be enhanced. The researcher calls upon educational researchers to carry out empirical studies on the academic potential for emerging applications such as Facebook, Tweeter and WhatsApp **Keywords**: Staff, University, Mobile, Learning, Utilization, Adoption

# EFFECTS OF HALL CURRENT, ROTATION AND INCLINED MAGNETIC FIELD ON A FLUID FLOWING OVER POROUS PARALLEL VERTICAL PLATES WITH HEAT AND MASS TRANSFER

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#### ABSTRACT

An unsteady incompressible Magnetohydrodynamics (MHD) boundary flow of an electrically conducting fluid between two parallel vertical plates was considered. A strong, steady and inclined magnetic field of strength  $\mathbf{B}$  was applied into the fluid region. The coupled non-linear partial differential equations governing the flow were first nondimensionalized then solved using the finite difference method. Numerical values were simulated using the Matlab program. The profiles for velocity, temperature and concentration were demonstrated graphically for various values of the parameters  $\mathbf{m}^*$  for Hall current,  $\Omega$  for angular velocity of the system,  $\mathbf{S}$  for the suction velocity at the plate and  $\lambda$  for the Sine of the angle  $\alpha$  of application of the magnetic field. The results were then interpreted physically to provide important insights in geophysical fluid dynamics. It was found that the primary velocity decreases at various rates from maximum at the left plate to zero away from the plate for various values of parameters  $\mathbf{S}$  and  $\lambda$ . As distance from the left plate increases, the secondary velocity decreases to a critical value then increases to a maximum constant value for various values of parameters  $\mathbf{m}^*, \Omega, \lambda$  and  $\mathbf{S}$ . The temperature and concentration decreases at various rates from a maximum value at the left plate to zero away from the plate for various values of  $\mathbf{S}$ . **Keywords:** Magnetohydrodynamics, Heat transfer, Mass transfer, Coriolis Effect.

# COMPETITIVE STRATEGIES AND PERFORMANCE OF LIFE ASSURANCE COMPANIES IN KENYA

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#### ABSTRACT

Despite efforts to improve the life assurance sector in Kenya, not much has been achieved. The country's growth in life insurance lags behind compared to other developing countries. This study sought to investigate the effect of competitive strategies on the performance of life assurance companies in Kenya. The objectives of this study are to evaluate the effect of cost leadership, differentiation, market focus and customer relationship management on performance of life assurance companies in Kenya. The study adapted a descriptive research design. The target population was the 26 life assurance companies in Kenya and the unit of analysis was top, middle and line managers of the 26 life assurance companies. A sample of 150 managers was selected using systematic random sampling. Data

was collected using questionnaires. Reliability was tested through Cronbach's alpha. The analysis of quantitative data was carried out using descriptive statistics of frequencies, mean, standard deviation, correlation and regression model. The rcommendations were as follows; Life assurance companies should sustain and continually improve on competitive strategies by investing more on these strategies. This is because these strategies have a significant effect on performance in life assurance companies. The life assurance companies should also consider improving on the CRM and market focus by, investing more in IT techniques that monitor and record customer behavior and preferences, interact more with customer, create more products and services to suit specific customer needs and explore more to find more market segments. Life assurance companies should make sure that their employees and the management is aware of them and works toward continually improving them.

Keywords: Life insurance, Cost leadership, Differentiation, Market focus, Customer relationship management.

# IMPACT OF HEURISTIC BIASES ON INDIVIDUAL INVESTOR DECISION MAKING PROCESS AT NAIROBI SECURITIES EXCHANGE: A SURVEY OF INDIVIDUAL INVESTORS IN MERU COUNTY

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#### ABSTRACT

Although finance has been studied for many years, behavioural finance is quite a new area. Behavioural finance theories, which are based on psychology, attempt to understand how emotions and cognitive errors influence individual investors' decisions. The concept of investors' decision-making process informs the design and delivery of investment opportunities. Traditional finance proposes a rational, risk-averse investor seeking to maximize returns, making the right decisions at the right time with correct information at hand and is not diverted by emotions and feelings. Recent empirical research has identified deficits in the traditional finance view. Investor irrationality, multiple risk attitudes for the same investment, and other investor behaviours cannot be explained fully by the traditional finance models. A significant insight of behavioural finance has been the manner in which individuals compress massive information into simple rules, known as heuristics, to simplify and speed up complex decisionmaking. This study analyzed the influence of heuristics variables on the individual investor decision making process in Meru County, with overconfidence, information availability, anchoring, gamblers fallacy, representativeness and hindsight measured as the indicative parameters. The target group was individual investors residing in Meru County with regular trading at the bourse. A descriptive survey was adopted and purposive sampling used to select the 144 individual investors to whom a pre-tested questionnaire was administered through use of Kobo Collect Toolbox. Data was analyzed using Factor Analysis aided by SPSS software version 2.0. Information availability bias had the highest impact on investment decisions, implying that investors rely on readily available and familiar information for their stock investment decisions. Other heuristics biases that impacted investor decision making process moderately were overconfidence and anchoring biases while Gambler's fallacy and representativeness biases had low impacts on the decision making process. The influence of the factors has both positive and negative influence ob the individual investor. This study contributes to behavioral finance research, and provides insights on "how investors think" to develop and market investment products, and development planners and policy makers. Keywords: Behavioral Finance, Hindsight, Gamblers Fallacy, Overconfidence, Availability, Anchoring

# EFFECT OF WATER AND SANITATION INFRASTRUCTURE INVESTMENT ON KENYAN ECONOMIC GROWTH

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#### ABSTRACT

The impact that water and sanitation infrastructure investment has on the growth process of any economy should not be underrated. With high population growth and increasing urbanization rates especially on developing countries, adequate and efficient water delivery systems are needed due to their high demand. United Nations recommends that developing countries should commit 1% of their Gross Domestic Product to Water and Sanitation infrastructure investment for them to realize high economic growth. Though the Kenyan government has not met this benchmark, it has continued to invest in water and sanitation with the aim of achieving the envisioned 10% growth rate which still has not been met since 2012. The main objective of this paper was to determine the effect of water and sanitation infrastructure investment on economic growth in Kenya from the year 1974 to 2015. A causal research design was used to establish the cause - effect relationship among the study variables. Vector Error Correction Model was estimated using Ordinary Least Squares technique. The paper found that water and sanitation infrastructure investment has a positive coefficient of 0.3165 and significant effect on GDP growth with a p-value 0.0000<0.05. This means that unit increase in WSii will increase the GDP growth in Kenya by 31.65% when other factors are held constant. Both urbanization rate and population growth had negative and statistically insignificant effect on economic growth. The dummy variable representing the Water Act reforms of 2002 was positive and statistically significant and the one representing the 1984 drought and 1997/98 Elnino was negative and statistically significant effect on Kenyan economic growth. The study recommends increase of development spending on water and sanitation for universal access to clean water and adequate sanitation services to be achieved by 2030 together with mitigating the adverse effect of recurrent droughts and floods to realize the 10% economic growth rate. **Keywords:** Infrastructure, Investment, Vector error correction model, Gross Domestic Product

# INNOVATIVE EMPLOYMENT PRACTICES AND EMPLOYEES' PERFORMANCE: UNDERSTANDING MEDIATING EFFECT OF SELF-EFFICACY IN THE CONTEXT OF COLLECTIVIST ECONOMY

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#### ABSTRACT

Evidence of positive and insignificant correlation has characterized research on the relationship between human resource management (HRM) practices and employees' performance in the last decades, but the notable difference lies in the contexts and designs employed by researchers. While it is obvious that most of these research studies took place in the developed economies, the focus of researchers on underpinning the relationship between HRM practices and performance has remained anecdotal in the developing countries, most especially in the collectivist economy context. Using data from a survey of 175 respondents in a university in Kenya, the study investigated the relationship between innovative employment practices and employees' performance with self-efficacy as a potential mediator. Findings from the study showed a significant relationship between innovative employment practices and employees performance ( $R^2 = 94.38\%$ , P<0.05), and the relationship is also mediated by construct of self-efficacy. The findings from this study support self-determination theory which explains that fulfilment and satisfaction of certain innate psychological needs will generate positive discretionary efforts, which in turn, result to positive outcomes. The practical implication of this study is that experience of positive innovative practices by employees in the organization will enhance self-efficacy which will, in turn, result to performance outcomes. The study employed a cross-sectional design and therefore has inability to establish a causal relationtionship. Therefore, subsequent studies investigating innovative employment practices and performance relationship need to focus on logitidunal design so as to determine causal relationship. Also, it is limited to an educational institution (university), therefore, its findings cannot be generalized across other sectors especially in a collectivist environment. Keywords: Self-determination theory, Human resource management practices

# INFLUENCE OF MOBILE BANKING SERVICES ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING SAVINGS AND CREDIT CO-OPERATIVES IN MERU COUNTY, KENYA

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#### ABSTRACT

This paper developed an original framework to explore the direct effect of mobile banking services on the financial performance of deposit taking Savings and Credit Cooperatives (SACCOs). The study applied two original concepts

– technology adoption and performance to develop an integral model that explores the growth of an organization. The researchers employed empirical methods, encompassing utilization of questionnaire survey to verify the hypotheses and explore their managerial and theoretical implications. This study has summarized literature on mobile banking services and customer satisfaction into a new managerial framework of organizational performance framework. It utilized new arrangement of two constructs; technology adoption and mobile service, to develop an original framework that enhances organizational performance. The study adopted a descriptive research design and data was collected from the top management of the 11 deposit taking SACCOs. This study established a positive and significant relationship between mobile banking services and financial performance of the deposit taking SACCOs. Although past research has highlighted the relevant issues about organizational performance, few studies have explored this phenomenon within the financial sector in Sub-Saharan context. Therefore, this paper developed the research framework of mobile phone money to fill the research gap specifically in Kenya Financial industry context. Keywords: Mobile banking, financial performance, Deposit taking SACCOs

# UPSHOT OF REGULATORY BASED CREDIT RISK MANAGEMENT ON RETURN ON EQUITY OF COMMERCIAL BANKS IN KENYA

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#### ABSTRACT

Kenya has one of the most vibrant banking sectors in the entire East African region. Money lending practices have recently been a major target for almost every commercial bank, a phenomenon that has intensified competition and consequently increased loans default rates hence amplified exposure to credit risk. Central bank of Kenya (CBK) as banking sector regulatory authority adopts CAMEL rating system in its endeavor to improve the credit worthiness assessment process. Specific objectives of the study were to determine the effect of quantitative CAMEL components namely; capital adequacy, asset quality, earnings ability and liquidity adequacy, on Return on Equity (ROE) of commercial banks in Kenya. Descriptive research design was adopted. The population of study was fortytwo licensed commercial banks in Kenya from 2011 to 2016 and purposive sampling of 39 banks was done. Multiple linear regression model was used in data analysis and t- statistic at 5% significance level was employed in test of hypotheses. The model intercept was 0.857 implying 85.7% of changes in ROE of commercial banks were attributable to the predictor variables. The study established that Capital Adequacy had a negative insignificant effect on ROE with a coefficient of -0.258 and a p-value of 0.118>0.05. Asset Quality and Earnings Ability had negative significant effect on ROE with coefficients -0.959 and -0.596 respectively, and p-values 0.000 < 0.05. Liquidity Adequacy had a regression coefficient 3.370 and a p-value of 0.000 hence a positive significant effect on ROE. The study concludes that regulatory based credit risk management has significant effect on ROE of commercial banks and recommends that CBK carry out a banking sector analysis on the most appropriate and optimal percentage levels for the respective CAMEL components to be maintained by commercial banks. Keywords: Credit risk, Capital adequacy, Asset quality, Earnings ability, Liquidity adequacy

# AGIKUYU WOMEN'S INDIGENOUS KNOWLEDGE SYSTEMS ON FOOD CROP PRODUCTION IN PRE-COLONIAL SOUTHERN KIKUYULAND UP TO 1902

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#### ABSTRACT

This paper examines the various Agikuyu Women's Indigenous Knowledge Systems (AWIKS) on food crop production in pre-colonial Southern Kikuyuland (current Kiambu County). The Agikuyu women traditionally contributed to the subsistence food crop production through the proper use of their indigenous knowledge systems on food crop production. A study was conducted in Kiambu County in 2017 to examine the role of AWIKS on food crop production prior to 1902. The study was premised on the basis that in the pre-colonial setup the Agikuyu women of Kiambu ensured enough food production in their households through the proper use of indigenous

knowledge systems. The study used a descriptive research design and the main source of information was oral interviews, archival records and secondary data. The target population was 15,047 people who were aged 65 years and above from Kikuyu, Lari and Limuru Sub-Counties. The study used purposive and snowballing technique to get the respondents with the most relevant information until the data reached saturation at 68<sup>th</sup> respondent. The study used in-depth interview guide as instrument of oral data collection; oral data were corroborated with archival records and secondary data analysis. The study used the Women and Development (WAD) theory to recognize the role of AWIKS on food crop production. The study established that in pre-colonial period the Agikuyu women of Kiambu grew a variety of seasonal food crops, which demanded intensive labour and availability throughout the year. Therefore, commanded detailed indigenous knowledge systems in weather observation and prediction, identifying quality seed varieties for planting, improving soil fertility and suitability, they had knowledge on reducing weed growth in the farm, indigenous farming methods, knowledge in storage and preservation of food crops. All these knowledge systems helped the women to increase food crop productivity in their farms and to improve food supply in their households. Therefore, there is need for more recognition and integration of some of AWIKS on food crop production systems and in policy issues related to mitigation of hunger in order to ensure sustainable supply of food crop in Kiambu County.

Keywords: Pre-colonial, Agikuyu Women, Food Crop Production, Kiambu County

# A STATISTICAL ANALYSIS OF GENDER AND METAPHORICAL CONCEPTUALIZATION OF EKEGUSII POP SONGS

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#### ABSTRACT

Gender is a vital determinant in the comprehension of pop songs. The composers of pop songs employ metaphors to express ideas through music. The goal of this paper, therefore, is to establish the association between gender and metaphorical conceptualization of Ekegusii pop songs. The study is anchored in the Conceptual Metaphor Theory and the principles of the generic Great Chain of Being Metaphor. The study adopted a mixed research method. Amasomo (Education) and Obwanchani (Love) Ekegusii pop songs by Embarambamba and Ontiri Bikundo respectively were purposively sampled for this study based on their richness in metaphoricity. An interview was conducted among the 36 participants of the study who were selected based on the dichotomy of gender. The study identified 54 metaphors using the criteria adapted from the Metaphor Identification Procedure Vrije Universiteit. The data was analysed using the Statistical Package for Social Sciences in which Chi-square at a significance level of 0.05 was employed to test the statistical relationship between gender and metaphorical conceptualization of Ekegusii pop songs. The study found that gender significantly influences the conceptualization of A HUMAN BEING IS A HUMAN BEING, A HUMAN BEING IS AN ANIMAL and A HUMAN BEING IS AN OBJECT conceptual domains. However, Chi square test analysis showed insignificant association between gender and the conceptual domain of A HUMAN BEING IS A PLANT. The paper concludes that males and females conceptualize metaphors differently. The study recommends that language researchers should employ the Metaphor Identification Procedure Vrije Universiteit in metaphor studies.

Keywords: Gender, EPS, Metaphor, MIPVU, GCBM, Ekegusii

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