



**Wolaita Sodo University  
Graduate Studies Directorate**

# **BOOK OF THESIS ABSTRACTS**

## **Volume III**

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## Dedication

This book is dedicated to the late Dr. Deribe Debella, former Educational Planning and Mang't department head, Wolaita Sodo University.

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## Preface

Wolaita Sodo University (WSU), which was established in 2007, is one of the 45 public universities in Ethiopia. In September 2011, the University started master's program in 4 fields of study (Public Health, Rural Development and Planning, Agricultural Knowledge Management and Communication, and Educational Leadership and Management) with 50 students (40 Male and 10 Female). In 2013, it started one PhD program "Livelihood and Poverty Reduction" with 4 male students.

Graduate studies in WSU are now getting broad and have a number of graduate programs in various fields of study. In 2021, the numbers of programs in graduate studies have reached 63 (55 Masters, 2 Specialty and 6 PhD). Students from different parts of the country have joined the programs. Research based academic study which help students to develop employment-relevant skills is delivered in all programs. The student population in all program modalities (Regular, weekend and summer) is close to 2677 (2589 (masters), 43 (PhD) and 45 (Specialty)).

Research is core part of graduate studies. Demand driven research is always important. However, strategically, the graduate study programs seek to focus on research agendas where students can match skills and expertise to the specific challenges and needs of the locality and nation. In this regard, graduate programs in WSU are working to play a more active and crucial role in bolstering WSU's status towards as applied university. The number of research papers presented across a wide range of academic disciplines and being evaluated under strict assessment has been increasing. This book of abstracts compiled thesis ABSTRACTs of graduate students of WSU and presents Volume III (2020). It is believed that the document is helpful to students, academic staffs, and relevant stakeholders. In addition, it also helps to avoid duplications of research efforts.

## Message from the University President



Takele Tadesse Adafrie (Prof.), President

I am very much pleased to put my words in this book of thesis abstracts of graduate students of Wolaita Sodo University (WSU). In 2020, the Ministry of Science and Higher Education of Ethiopia has categorized WSU as University of Applied Sciences. In light of this, the university is playing a critical role in supporting knowledge-driven economic growth strategies and the construction of democratic, socially cohesive societies in Ethiopia by training a qualified and adaptable labor force; generating new knowledge; and providing the capacity to access existing stores of global knowledge, disseminate it, and adapt it to local use. The university also aspires to be technologically driven centre of agricultural Excellence by 2030GC.

The university has continued to train professionals in various fields and levels including bachelor, masters, doctor of philosophy and speciality in the field of medicine. It also offers wide range of community services and promotes the transfer of knowledge to the community. Graduate students have been conducting researches that are based upon the priority areas of WSU and the nation. I believe that this compilation of thesis abstracts of graduate students may highlight readers on: the contents covered methodologies, findings and suggestions forward in various fields of study and years. This book is above all an opportunity to post graduate students as it provides tested experience and helps them bridge the knowledge gaps, improving the research quality, and push for greater responsibility.

On behalf of the University and myself, I would like to thank graduate students and their advisors for their contribution, and also the directorate of graduate studies for taking the responsibility in preparing the book of abstracts for publication.

With regards,  
Takele Tadesse (Prof.)  
President of Wolaita Sodo University

## Message from the Vice President for Academic Affairs



Mulatu Dea (PhD), VPAA

It gives me a genuine pleasure to forward my message in this book of thesis abstracts of Wolaita Sodo University (WSU). In 2020, Ministry of Science and Higher Education (MoSHE) categorized WSU under Universities of Applied Sciences with the mission to undertaking professional, practice-oriented teaching and research; focusing on bachelor, and master programs, and sometimes professional and work-based doctorate. At WSU, teaching learning activities in graduate study programs are supported by research work where students are basically required to conduct original research works. Meanwhile, this book of thesis abstracts highlights research works that have been covered by graduate students and believed to serve as important source of information.

On behalf of Vice President for Academic Affairs (VPAA) of WSU, I would like to thank graduate program students and their advisors for their contribution. The VPAA also expresses its sincere gratitude to directorate of graduate studies for taking the responsibility in preparing the book of abstracts for publication.

With regards,

Mulatu Dea (PhD)  
Vice President for Academic Affairs

## Message from the Graduate Studies Director



Fanuel Laekemariam Aemero (PhD), Director of Graduate Studies Directorate

This book documented abstracts from thesis submitted as partial fulfilments of Master's degree in 2020. It compiled research findings across a wide range of academic disciplines. Different individuals played a significant role in making this book of thesis abstracts possible. The support and encouragement provided from the Vice President for Academic Affairs are well recognized. On behalf of GSD, my sincere appreciation goes to Dr. Kuse Gudishe (former dean school of graduate studies), Senait Samuel (secretary), Kebebush Jalda (Former secretary of GSD), Mrs. Abenet Kebede, Mr. Desta Dana and Mr. Amsalu Keno (Library and Documentation Directorate), Zemach Lemecha (College of Agriculture(COA)), Yared Paulos (College of Social Science and Humanities (CSSH)), Tesfahun Tegegn (College of Business and Economics (CBE)), Mesfin Balgu (College of Education and Behavioral Sciences(CEBS)) and Shewangizaw Hamelo (College of Natural and Computational Sciences (CNCS)). In addition, Post Graduate Coordinators who participated during this document preparation are also acknowledged. This includes: Ermiyas Belete (College of Agriculture), Merkneh Mojira (College of Social Science and Humanities), Dr. Eyasu Wada (College of Natural and Computational Sciences), Mengistu Matino (College of Business and Economics), Million Desalegn (College of Education and Behavioral Studies), Paulos Bogale (School of Informatics), Enguday Meskele (School of Law), Abebe Sorsa (College of Health and Medicine), Dr. Solomon Mosu (School of Veterinary Medicine) and Ermiyas Mekonen (Assistant Registrar for Graduate Studies).

I hope that this book would highlight the range of academic disciplines and research areas covered by graduate students of WSU and would become an important source of information for students, academic staffs, and relevant stakeholders for better engagement towards innovative research. In addition, it would also help to avoid duplication of efforts. We have tried our level best to incorporate all the abstracts; however, due to different reasons we may not be exhaustive. If it happens, the office requests an apology and will promise to incorporate in the coming book of abstracts. For those who are interested, full thesis can be accessed from graduate studies library or via the following link [Opac.wsu.edu.et](http://Opac.wsu.edu.et) (accessible within the university). For comments, please forward using the address indicated below.

Best regards,

Fanuel Laekemariam Aemero (PhD, Associate Professor)

Director, Graduate Studies Directorate

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## **1. College of Agriculture**

### **1.1. Department of Animal and Range Sciences**

# **EFFECT OF CULTIVAR, SPACING, AND HARVESTING STAGE ON DRY MATTER YIELD AND NUTRITIVE VALUE OF BRACHIARIA IN DAMOT GALE WOREDA**

**By: MESFIN WORKU**

**MAJOR ADVISOR: HABTAMU LEMMA (PH.D)**

**CO-ADVISOR: KASSA SHAWLE (PH.D)**

## **ABSTRACT**

*The study was conducted to evaluate the effects of cultivar, spacing and harvesting stage on dry matter and yield and nutritive value of hybrid Brachiaria cultivars in Damot Gale Woreda, Wolaita zone, Southern Ethiopia. A factorial experiment with two cultivars, 3 harvesting stages (60, 90 and 50% heading) and 3 plant spacing (50×25 cm, 50×50 cm and 75×25 cm) with 3 replications were used. The data collected were growth characteristics such as days of emergence, days to 50% heading, plant height (PH), number of tillers per plant (NTPP), plant density (PD) and leaves to stem ratio (LSR) and yield parameters like green forage yield (GFY) and dry matter yield (DMY). Chemical analysis was conducted for dry matter (DM), dry matter content (DMC), CP, ash, NDF, ADF, ADL, ME and IVOMD. Results indicated that cv. Mulato I produced significantly ( $P<0.05$ ) higher PH, NTPP, PD, GFY, DM, DMY, NDF, ADF and ADL, while higher LSR, ash, CP, ME and IVOMD were recorded by Mulato II. There was significant difference ( $P<0.05$ ) in DM yield with increasing harvesting stages in both cultivars. Mulato-I gave the highest GFY ( $59.46 \pm 4.43$  t/ha<sup>-1</sup>) and forage DM ( $14.55 \pm 6.8$  t/ha<sup>-1</sup>) at 50 cm x 25 cm planting spacing at  $148.4 \pm 2.17$  days and the highest NDF (70.11%) and ADF (43.738%) at 50% of heading, while Mulato II had higher forage in vitro organic matter digestibility (IVOMD) at 60 days of harvesting (58.6%). As harvesting dates were deferred (19.17% at 60 days, 18.13% at 90 days and 13.64% at 50% of heading) the CP content in forage has been declined. The main effects and two-way interaction on cultivars by spacing, or cultivars by harvesting stages significantly influenced ( $P<0.05$ ) forage yield and quality parameters. Though, the yield parameters of hybrid Mulato I is higher, it is concluded that, both hybrid Brachiaria cultivars were recommended to use in the study areas for its higher dry matter yield and very good quality including CP of these grass, respectively. Correspondingly, it is suggested to harvest the grass at 90 days of the first plantation growth without compromise both yield and quality.*

Key words: Dry mater yield, yield parameters, Brachiaria grass, Chemical composition, Southern Ethiopia.

**BIOMASS YIELD AND NUTRITIONAL VALUE OF OAT (*Avena sativa*),  
VETCH (*Vicia villosa*) AND THEIR MIXTURES UNDER IRRIGATION  
CONDITION IN WOLAITA ZONE, DAMOTE GALE DISTRICT  
SOUTHERN ETHIOPIA**

**BY: ALEMAYEHU JAMBO**

**MAJOR ADVISOR: KASSA SHAWLE (PH.D.)**

**CO-ADVISOR: HABTAMU LEMMA (PH.D.)**

**ABSTRACT**

*The study was conducted to evaluate biomass yield and nutritive value of oat (*Avena sativa*) and vetch (*Vicia villosa*) under irrigation condition varying seed proportion in damote gale woreda, during 21 December up to march 20 off season in the year 2018. The experiment was conducted using 100% oat + 0% vetch (T1), 0% oat +100% vetch (T2), 85% oat + 15% vetch (T3), 70% oat + 30% vetch (T4), 55% oat + 45% vetch (T5) and 40% oat + 60% vetch (T6) laid out in a randomized complete block design with three replications. Data were collected at 60, 75, and 90 days. The major data recorded were date of emergence, plant height, and number of leaves per tiller, number of tillers per plant, Total fresh yield, Dry matter yield and chemical composition. Significant ( $P<0.05$ ) differences were observed for all measured agronomic traits except for Number of tillers per plant. The greatest number of days to emergence was recorded for 0% oat + 100% vetch (T2) (18.67 days), whereas Shortest dates to emergence were recorded by 100% oat + 0% vetch (T1) (13.33) compared to the other treatments. The highest DMY and DM accumulation were obtained from the mixture of 55% oat + 45% vetch (T5) (6.75 t/ha) and (24.46) respectively. The LER of mixtures were greater than 1 except seed proportion of 85% oat + 15% vetch (T3). This showed that intercropping was superior in 55% oat + 45% vetch (T5) in terms of resource use efficiency and this could be attributed to the mutual complementary resource utilization relationship by the species in the mixtures. All tested oat and vetch mixture had similar Number of tillers per plant. 55% oat + 45% vetch (T5) had lower NDF (45.77%), ADF (8.01%) and ADL (1.31 g per kg) concentrations and the highest CP (23.14%), IVDMD (73.14) content. Therefore, it is recommended that farmers in high land areas of Wolaita Zone including Adye Sibaye Keble and other areas having similar agro-ecology and soil type could use 55% oat + 45% vetch (T5) were because they provided reasonably higher nutritional (CP) value and better forage yield, respectively.*

**Key words:** *Avena sativa* (Oat), Biomass yield, chemical composition, yield parameters, *Vicia villosa* (Vetch).

# EFFECTS OF REPLACEMENT OF SOYBEAN MEAL WITH PIGEON PEA (*Cajanus cajan*) SEED MEAL ON BROILER PERFORMANCE AND CARCASS CHARACTERISTICS

BY: AKLILU GETAHUN ADEMA

MAJOR ADVISOR: YONATAN KASSU (PH.D.)

## ABSTRACT

*A seven-week study was conducted to determine the effects of toasted PSM on the growth performance and carcass characteristics of broiler birds. In a completely randomized design, one hundred eighty unsexed, day-old broiler birds used for the study were divided into four treatment groups. Each treatment group was divided into three replicates of fifteen birds each. Four treatments feed containing toasted pigeon pea at the level of 0 % (T<sub>1</sub>), 10% (T<sub>2</sub>), 20% (T<sub>3</sub>) and 30% (T<sub>4</sub>) of the total diets. Chemical analysis of the feeds used, DMI, body weight gain, carcass characteristics and partial budget analyses and measured. There were highly significant differences ( $P < 0.05$ ) in daily and total DM intake of starter phase, finisher phase and entire experimental period. The birds fed T<sub>3</sub> had significantly ( $P < 0.05$ ) higher daily and total DMI followed by T<sub>4</sub>, T<sub>2</sub> and T<sub>1</sub>(control) group in the finisher phase and the entire experimental period whereas in starter phase birds feed T<sub>2</sub> no significant ( $P > 0.05$ ) differences with birds fed T<sub>4</sub>. Final BW, BW gain and ADG during in the finisher phase and overall experimental period birds fed T<sub>3</sub> had significantly ( $P < 0.05$ ) higher differences followed by T<sub>4</sub> which was comparable with that of T<sub>2</sub> and control group (T<sub>1</sub>) of birds while birds fed T<sub>2</sub> have not significantly different ( $P < 0.05$ ) with that of control group (T<sub>1</sub>). There where no significant difference ( $P > 0.05$ ) in FCR in starter, finisher and overall experimental period. There were significant differences ( $P < 0.05$ ) in all cut part of the carcass yield among the treatments while the dressing percentages of the birds were not affected ( $p > 0.05$ ) for all the treatments respectively. Bird feed on the T<sub>3</sub> had significantly ( $P < 0.05$ ) higher slaughter weight than those treatment diets which is attributed to higher feed intake and body weight gain. In starter phase the high rate of mortality occurred at 30% of PSM but no death at all in the finisher phase. However, the highest NR and MRR were obtained for the birds fed under T<sub>3</sub> followed by T<sub>4</sub>, T<sub>2</sub> and T<sub>1</sub> (control) diets. However, it was seen that the replacement of PSM in diets particularly at the levels of 20% enhanced optimum growth of birds, carcass characteristics and economically cost-effective feeding.*

**Keywords:** Broilers, Toasted pigeon pea, Growth Performance, Carcass parameters, Cost

**ASSESSMENT OF FEED RESOURCES AND NUTRITIONAL VALUE  
OF MAJOR BROWSE SPECIES IN BECHO WOREDA, OROMIA  
REGIONAL STATE, ETHIOPIA**

**BY: DERARTU CHAKA**

**ADVISOR: NETSANET BEYERO (PhD)**

**ABSTRACT**

*The study was conducted to assess the feed resource and nutritive value of the major browse species in Becho woreda, Oromia Regional State, Ethiopia. Four representative kebeles, 2 from midland and 2 from lowland agro-ecology were purposively selected. For data collection, 97 household heads were randomly selected and interviewed to identify locally important major browse species. To collect data, field observation, household survey and focus group discussion were used. The sample (leaves and twig) were collected during the late dry (March to April) seasons to evaluate the chemical composition and in vitro dry matter digestibility. The result revealed that crop residues, natural pasture and indigenous browse species make a main livestock feed ingredients. According to the respondents, the most preferred browse species by different classes of livestock, in the study area were *Acacia labia*, *Buddleia polystachya*, *Carissa edulis*, *Dodonnaea angustifolia*, *Justicia schimperiana*, *Olea africana*, *Phtolacca dodecandra*, *Roda abyssinica*, *Rhus vulgaris*, *Vernonina amygdalina*. Livestock in the study area consumed browse species at one time or another during the year, depending upon availability and the preference by animal species. There was significant difference in Ash, CP, EE, NDF, ADF, ADL, CT content and IVDMD within agro-ecologies in both leaves and twigs of browse species. The Ash, ADF, ADL and CT content of browse species in leaves were varied ( $p < 0.05$ ) among the two agro-ecologies. While agro-ecological variation ( $p < 0.05$ ) was observed with EE and ADF content in twigs of browse species. Based on nutritional evaluation, leaves of all investigated fodder trees and shrubs and twigs of *Acacia lahai*, *Vernonia amygdalina* and *Justicia schimperiana* have higher CP value which can supplement Animal for more production, particularly during dry season. To prove the result of this study, it is recommended to conduct animal feeding and digestibility trials by supplementing with the promising species to animals fed on poor quality roughages.*

**Key words:** Browse species, Chemical compositions, Feed resource, and In vitro dry matter digestibility.

# ASSESSMENT OF FEED RESOURCES, FEEDING PRACTICE AND MILK YIELD OF DAIRY COWS IN WOLAITA SODO TOWN, SOUTHERN ETHIOPIA

**By: SISTER HOSSAE TSEGAYE**

**ADVISOR: NETSANET BEYERO (PhD)**

## ABSTRACT

*Two approaches were employed to see the assessment of feed resources, feeding practice and milk yield of dairy cows in Wolaita Sodo Town, Southern Ethiopia. The first approach aided by a structured questionnaire and field observations which were administered to 85 (53 cooperative and 32 private) dairy farms by using survey. Field observation was the second approach where, 8 (4 dairy private and 4 cooperative) farms a total 24 lactating dairy cows were selected purposively, which was three from each dairy farm. Those cows were under stall feeding and depended on existing feed resource. The lactating cows were selected based on their lactation period and they were between 2nd and 3rd lactation period, two to four months after calving and at age of 3.5 to 6.5 years. About their blood levels, the farmers have no information regarding to their blood levels. The field observation data were collected for a period of three months where feed intake, body weight and milk yield were measured and recorded. Milk and feed samples were collected for quality evaluation. The common dairy cow feed resource collected during field observation was: hay, commercial concentrate, wheat bran, elephant grass, Barley straw, cabbage waste, enset leaves and sugar cane tops. The supply of dry matter (DM) per cow/day in dairy cooperative were 9.14kg per cow/day but to meet the daily nutrient requirement for maintenance and production the dry matter will be 11.59 kg/cow/day the value of 9.14kg per cow/day obtained from these feed resource shows a negative balance (-2.45kg) between supply and requirement for efficient milking cow. In dairy private farm the supply of dry matter (DM) were 8.65 kg/cow/day but for efficient milking cow to meet the daily nutrient requirement for maintenance and production the dry matter will be 9.81 kg/cow/day, obtained from these feed resource shows a negative balance (-1.16kg) for efficient milking cow. These feedstuffs were varied in quality and quantity across in the study area. Inadequate feed supply and poor quality of the available feedstuffs are some of the factors. There is a mismatch between the supply and requirement of animals in the study area. The average daily milk yield of lactating cows under survey and field observation ranged from 1.4-4.72 liters and 6.71-14.20 liters per cow per day, respectively. For milk quality the highest milk fat content value was recorded at dairy cooperative farms 4.2%. While (2.9%), (7.06-7.6) and (0.7-0.78) were for protein, SNF and ash respectively. In conclusion unless efforts are made to meet the nutrient requirements of dairy cattle through proper feeding practice and supplementation it is not possible to optimize the milk production potential of dairy cows.*

**Keywords;** dairy cow, feed, feeding practice, milk yield

# EFFECTS OF SUPPLEMENTATION OF BRUGMANSIA SUAVEOLENS BERCHT LEAF, WHEAT BRAN AND THEIR MIXTURE ON NUTRIENT UTILIZATION AND ECONOMIC EFFICIENCY OF KAFFA GOATS FED GRASS BASED DIET

BY: WONDIMAGEGN ALEMAYEHUABEBE  
ADVISOR: KASSA SHAWLE (PHD)

## ABSTRACT

*The experiment was conducted to evaluate the effect of supplementations of sun-dried Brugmansia Suaveolens Bercht leaf, wheat bran and their mixture on nutrient utilization, economic efficiency and to determine the correlation of nutrient intake, digestibility, weight gain and feed conversion efficiency of Kaffa goats fed grass based diet. Supplemented by sun dried Brugmansia Suaveolens Bercht leaf (WAT leaf), wheat bran and their mixture. The experiment was carried out at Gimbo District, Kaffa Zone; using twenty five intact male yearling Kaffa goats with a mean ( $\pm$ SD) initial body weight of  $15.38 \pm 0.31$ kg. The animals were vaccinated against anthrax, goat pox and pasteurellosis, dewormed and sprayed against internal and external parasites, respectively. The experiment consisted of digestibility trial of 7 days and feeding trial of 90 days. The experiment was laid out in a randomized complete block design (RCBD) with five blocks consisting of five animals per block based on their initial body weight. Dietary treatments were randomly assigned to one of the five treatment diets within a block. . The treatments consisted of T1 ad libitum feeding of grass hay for, T2 ad libitum grass hay + 300g sun dried WAT leaf; T3-grass hay ad libitum+200g sun dried WAT leaf +100g wheat bran, T4- grass hay ad libitum+100g sun dried WAT leaf +200g wheat bran; T5-ad libitum grass hay +300g wheat bran respectively. Water and salt were available free choice. Grass hay in the current study contained 7.04% crude protein (CP), 73.6% Neutral detergent fiber (NDF) and 40.3% acid detergent fiber (ADF). Goats in the un-supplemented treatment consumed higher ( $p < 0.05$ ) basal dry matter intake ((705.8 g/day) as compared to supplemented group. Supplementation significantly improved digestibility coefficient of DM ( $P < 0.05$ ) and CP ( $P < 0.05$ ). Supplementation highly increased ( $P < 0.05$ ) final body weight (FBW), feed conversion efficiency (FCE) and average daily gain (ADG). Goats supplemented with T2 had significantly higher ( $P < 0.05$ ) FBW (21.7 kg), FCE (0.09) and ADG (63.5g/day) as compared to the un-supplemented treatment, which had 16.1 kg, 0.02 and 10.8g/day, respectively. Similar to biological performance, economic analysis also showed that supplementation with T2 resulted in better return compared to others. Thus, it can be concluded that supplementation in general improved animal performance. Among the supplements, however, T2 is biologically optimum and economically feasible.*

**Keywords:** Economic efficiency; Nutrient Utilization; sun-dried Brugmansia suaveolens bercht leaf (WAT leaf); Supplementation; Kaffa goat.

## **1.2. Department of Rural Deleopment & Agricultural Extention**

**FACTORS AFFECTING YOUTH ECONOMIC EMPOWERMENT:  
THE CASE OF OFFA WOREDA, WOLAITA ZONE, SOUTHERN  
ETHIOPIA**

**BY: MULUKE N SAMUEL**

**ADVISORS: DR. M.SENAPATHY**

**ABSTRACT**

*Youth development is an unconditional posture for nation building as the strength of the future development of a nation is depending solely up on it. The future of any country is always predicated on its present youth's productive force. According to reports from World Bank (2010), about 50 percent of the developing world population is youths estimated at about 1.2 billion of age between 15 and 24 years. These statistics indicate that youths constitute a serious development opportunity as well as a Potential challenge particularly in developing countries. Therefore, this study was conducted economic empowerment of youth in Offa woreda. Multi-stage sampling technique was used to obtain a sample size of 146, Cross-sectional data was collected through semi- structured questionnaire and focus Group Discussion. Data were analyzed by using descriptive and inferential statistics, economic empowerment index and binary logit model. The index result showed that not empowered youths were 67% and empowered youths were 33%. These result indicated that the status of youth's economic empowerment in the study area was low. The binary logit model result revealed that major factors determining youth's economic empowerment in Offa Woreda were family size, saving amount, household income, dependency ratio, educational status, business plot, decision making, access to credit and access to market, These factors were significant and had positive association with youths economic empowerment. The finding showed that the number of Family size, saving amount, household income, dependency ratio, educational status, business plot, decision making, access to credit and access to market significant association with youth economic empowerment and also youth are seriously disadvantaged in terms of the above variables. Finding also showed that not empowered youth were (67%), and empowered youth were 33%. Therefore, the findings indicated that the states of youth economic empowerment in the study area were low. So, special and necessary attention should be given to the study area to the improvement of the different income sources, such as petty trade, sale of dairy product, and vegetable production. Regular based- strengthening of the adult education program in all areas of the woreda was also recommended in the manner that can reach all youth missed the formal education. Facilitation of the capacity building activities that can help the youth which were with the more dependency ratio.*

**Key words:** Youth Involvement, Economic Empowerment, Mixed Method Research Approach

# **DETERMINANTS OF RURAL HOUSEHOLD POVERTY: THE CASE OF SODO ZURIA WOREDA, WOLAITA ZONE, SOUTHERN NATIONS NATIONALITIES AND PEOPLES REGION, ETHIOPIA**

**BY: HABTAMU HONJA SHAGA**

**MAJOR ADVISOR: TEKLE LEZA (PHD)**

## **ABSTRACT**

*Poverty is one of the core issues and the most widespread social problems in the world. It has no geographical boundary. So, this study was carried out to identify the determinants of rural household poverty in Sodo Zuria Woreda of Wolaita Zone, Ethiopia. In order to achieve this objective, 152 rural households were selected by systematic random sampling technique following probability proportional sampling procedure. Primary and secondary data as well as quantitative and qualitative data were used. In this study, Cost of Basic Need approach was applied to determine poverty line and Foster-Greer and Thorbecke poverty index used to determine extent of rural poverty. The result of cost of basic needs approach shows that total poverty line of the study area was about 5348.073 birr per year per adult equivalent consumption. Using this poverty line as bench mark, the study indicated that 39.47 percent of the households were poor. Besides, the head count index, poverty gap and squared poverty gap indexes among the poor households were found as 0.3947, 0.1035 and 0.0427 respectively. The findings of binary logistic regression model show that eight significant variables at less than 1%, 5% and 10% probability level among 15 variables. Accordingly, family size was positive association with poverty of the rural household and statistically significant. Meanwhile, sex, age, educational level, land size, total livestock unit, use of technology and participation of saving were found out to have strong negative association with the rural households' poverty and statistically significant up to less than 10% probability level. Finally, there is a need to strengthen the link between rural development and poverty reduction programs, give attention for old aged and female headed households in interventions, limit population size through integrated family planning and education services, introduce appropriate livestock packages, and create awareness of farmers for using new agricultural technologies.*

**Key words:** Cost of Basic Needs, Determinants, Extent, Poverty, Wolaita Zone.

# THE EFFECTS OF CLIMATE VARIABILITY ON CROP PRODUCTION AND ADAPTATION OPTIONS: THE CASE OF HUMBOWOREDA, SOUTHERN ETHIOPIA

TESFAYE MENGESHA

MAJOR ADVISOR: MESFINTEBEJE (ASSISTANT PROFESSOR)

## ABSTRACT

*This study was initiated to identify the food crop farmer's choices adaptation options to climate variability with special emphasis to Humbo Woreda of Wolaita Zone of SNNPR of Ethiopia. Accordingly, the aim of this study was to understand the association of crop production with climate variability and adaptation options used by farmers at local level in Humbo Districts. The multistage sampling techniques were employed to select sample respondents. Firstly, Woreda was selected by purposively from 16 districts, secondly, the district was stratified based on agro-ecology like midland and lowland. Thirdly, one kebele was selected from midland and two kebeles were selected from lowland by using simple random sampling due to distinct characteristics across stratum. Finally, 142 sampled respondents were selected from three selected kebeles by using systematic random sampling technique based on probability proportional to size. Both primary and secondary data type were used in this study. Primary data were collected by using structured and semi structured interviews from 142 sample household heads, and focus group discussions and key informants respectively. Secondary data rainfall, temperature and crop data (maize, teff and sorghum) were collected from the National Meteorology Agency and Woreda Agriculture office respectively. Descriptive statistics, correlations analysis and multinomial logit model (MNL) regression analysis were used for data summary and analysis. The study focused mainly on two central themes: analysis of trend and variability of rainfall, temperature and crop production; identifying determinants that affect the choice of climate variability adaptation measures by farmers. Accordingly, to the 15 years (2002-2016) metrological data shows that rainfall was decreasing with the rate of  $-0.83\text{mm}$  while maximum and minimum temperature was rising by  $0.04^{\circ}\text{C}$  and  $0.06^{\circ}\text{C}$  respectively. Correlation analysis shows that crop production positively correlated with rainfall, but negatively associated with maximum and minimum temperatures. Some of the most common adaptation options and coping mechanisms are considered in the MNL model analysis were crop diversification, soil and water conservation practices, change planting dates and change in crop and variety. The result from the multinomial logit analysis showed that age of household head, gender of household head, education status, farm income, livestock ownership, distance to market, utilization of credit, and extension service were significance factors influencing to farmers' adaptation options to climate variability. Therefore, development interventions, policies and supportive services should be designed at different level to ensure effective access to extension service and affordable credit scheme to household head to enable them plan and adapt in the face of climate variability.*

**Key words:** Adaptation options, Climate variability, crop production, determinants

**RURAL FARM HOUSEHOLDS LIVELIHOOD STRATEGIES  
CHOICES: THE CASE OF BOLOSO SORE WOREDA WOLAITA  
ZONE, SOUTHERN NATIONS, NATIONALITIES AND PEOPLES  
REGIONAL STATE, ETHIOPIA**

**BY:- FANTAHUN FAKO**

**Major Advisor: YSIHAK GECHO (PhD, Asso.Prof.)**

**ABSTRACT**

*The major objectives of this study was intended to identify the existing livelihood strategies adopted by rural households and to assess factors that determine household's decision to choose alternative livelihood strategies. For the purpose of this study, primary data were collected from randomly selected 149 households. Due to sever land scarcity, high population presser and recurrent drought, from households in the study area widely engaged in and pursue diverse activities as livelihood strategies. The carrying capacity of agriculture to attain food and livelihood security is extremely declining from time to time. Diversifying livelihood strategies at current time became a common phenomenon in the study area. Descriptive statistics was applied to characterize the sample households' socio-economic, demographic, and institutional factors. Multinomial logistic regression model was applied to identify the factors determining the choice of rural household livelihood strategies on 15 explanatory variables. .The rural households in the study area pursued different livelihood strategies such as: on-farm alone 63(42.3%),on-farm+non-farm 55(36.9%),on-farm+off-farm,20(13.4%),and on-farn+non-farm+ off-farm livelihood strategies,11(7.4%).On-farm livelihood plying a leading role by contributing 72% of the total income of the households; where as non-farm and off-farm activities contributed 20% and 8% of the household incomes respectively. A total of 15 explanatory variables were included in the empirical models of which 11 were significant. Those variables include Age, Livestock ownership, Market proximity, Training, household total income, credit use, Dependency ratio, Land holding, Number of oxen owned, Sex, Cooperative membership, determine significantly choice of livelihood strategies. The finding of this study revealed that most farm households who chose farm and non- farm livelihood strategies were improved their livelihood. The results of this study suggest that any interventions (development practioners) in the livelihood of farm households need to consider the asset level they own, the dynamics of livelihood system and socio-economic contexts of the area. The result of this study also suggests that development intervention policies and supportive service suit the felt needs and circumstances of d/t groups of farmers.*

**Keywords:** Livelihood strategies, Rural Household, Boloso sore, Wolaita zone

# **DETERMINANTS AND EFFECT OF ADOPTION OF SMALL SCALE BIOGAS TECHNOLOGY BY RURAL HOUSEHOLDS: THE CASE OF SODO ZURIA WOREDA, WOLIATA ZONE, SOUTH EASTERN ETHIOPIA.**

**BY: AMISAL LEMMA**

**ADVISOR: YISHAK GECHO (PHD)**

## **ABSTRACT**

*The purpose of this study was to asses' determinants and effect of adoption of small scale biogas technology by rural households: the case of Sodo zuria Woreda, Woliata zone, South Eastern Ethiopia. In the study area, it is not well known to what extent the households using biogas are better-off than those who depend on traditional fuel. The total population selected in 3 sample Kebeles were stratified in to two strata (biogas user and non-user). A total of 153 farmers were randomly selected and interviewed using interviewed schedule. Then systematic sampling method was employed to select a total of 60 biogas users and 93 non-user respondents' household from the population frames of two strata in 3 sample Kebeles independently. Descriptive statistics, inferential statistics (chi-square and independent t-test) and binary logistic regression analysis were used to analyze data quantitatively. From the total discussed 11 determinant factors, gender, education of respondents'; family size, number of livestock, and attending training of respondents with biogas development had significant positive influence on the use of biogas technology. On the other hand, access to credit and gender had significant negative effect on the use of biogas technology. The current results revealed that only about 35.8% of the farmers are using biogas technology. The study showed that several factors were observed for the non-adoption status of biogas technology in the area. The main factors were high installation costs (55%), negative attitude of community towards biogas energy (8%), inadequate skilled technicians (25%), lack of adequate fund, lack of interest, and poor infrastructure (10%). According to respondent response, (79%), (70%), (88%), and (95%) of the biogas users said that it reduced expenditure on cooking energy, it saved time in preparation and cooking of food, it provided the much needed organic bio slurry, it reduced smoke in the kitchen, and it made cooking more convenient respectively. According to the findings in the study area the researcher recommended that, in order to support financial credit facilities should be made more accessible for the low income farmers, sustain educational and awareness creation on the use of biogas technologies should be enhanced and efforts ought to be done in training biogas. The governmental and non-governmental organizations should give emphasis on the supply of biogas technology in credit with extend in the area. It is better to strengthening farmers and makes them to focus on construction of new biogas technology in order expand benefits in the study area.*

**Key Words:** Biogas Technology, Adoption, Wolaita Zone

# **DETERMINANTS OF YOUTH UNEMPLOYMENT: THE CASE OF AREKA TOWN, WOLAITA ZONE, ETHIOPIA**

**BY: LOHA MENTA**

**ADVISOR: TEKLE LEZA (PHD)**

## **ABSTRACT**

*Now days, the growth of youth unemployment is one of the critical socio-economic problems facing Ethiopia in general and the study area in particular. However, which is not known about the factors exacerbating youth unemployment in the study area. In light of this problem, this study was conducted with objectives of identifying factors affecting youth unemployment, in Areka town of Wolaita Zone, Ethiopia. The study was based on qualitative and quantitative data. The samples were selected by using two-stage sampling design. Areka town were purposively selected and the primary data were collected from 120 youths (18-34 age group) selected by simple random sampling technique from the total kebeles which were also selected by simple random sampling technique from 04 kebeles found in the town. Data were collected by using questionnaire, interviews and focus group discussion. Descriptive and inferential statistics as well as binary logistic regression model were used to analyze the data. Among all the respondents, 20.83 percent were employed, while 79.17 percent were unemployed at the time of the study. The econometric model analysis show that household income, job preference, access to credit, access to training and cooperative membership significantly determine youth unemployment. Among this at 1% significant level ( job preference ) and 5% significant level (household income, access to credit, access to training and cooperative membership) Based on the findings of the study: Provide accommodative credit access, improve incomes of individual households and certain localities should be employed selectively.*

**Key Words: unemployment status, Youth, Wolaita, Ethiopia**

# **THE LEVEL OF WOMEN PARTICIPATION IN LIVESTOCK PRODUCTION AND MANAGEMENT PRACTICE: THE CASE OF BOREDA WOREDA, GAMO ZONE, SOUTHERN ETHIOPIA**

**BY: TADEWOS GUDETA**

**ADVISOR: MESFIN TEBEJE (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*This study was conducted with the aim of analyzing the Level of Women Participation in Livestock Production and Management Practice in Boreda Woreda. A multistage sampling procedure was employed to obtain a total of 114 respondents in study area, while descriptive statistics and ordered logit model were used to analyze the data obtained from the respondents. Data was processed by using SPSS software. Women participate in different livestock management activities. However, women's participation in the livestock production activities documented no marginal and they have been considered more as consumers than as producers. According to the study, it was indicated that rural women spend their time in livestock production, income generating activities and productive activities, which directly benefit their families and society in economic terms. The study showed that the average day for rural women in Boreda Woreda involves different activities such as fire wood collection, food preparation, boiling coffee, child care, cleaning of animal shed and poultry, water fetching, milking of cow, preparing of milk products, grazing of animals, collecting of fodder by grass cutting, transporting, animal health treatment, marketing, livestock feeding, pen cleaning, milking, herding and rearing poultry. Also the level of women participation as labor is more participating in, community services and contributing more in securing their household members food demand than other household members do. But women receive no remuneration for their labor, no monetary or maternal gains and no benefits in leisure time and improved living conditions. In general, the contributing factors that influences women's role in agriculture depends upon the women's dependence on their husband. The other one is illiteracy, ignorance, low socio-economic status and traditional religious and cultural dominance and low political participation in the community. Women are capable of changing themselves, reforming the society and motivating the next generation. Providing them with access to institutional credit, marketing and implementing policies that can address the growing needs of micro enterprise operators, provision of adult and non-formal education and training on management and entrepreneurship, providing with appropriate production and marketing premises, organizing women in cooperatives for mutual support and exchange of business ideas and empower the decision making ability of women at the kebele level are strategies which can immensely contribute to their development efforts.*

# **FACTORS AFFECTING ADOPTION OF IMPROVED DAIRY TECHNOLOGIES : THE CASE OF OFA WOREDA, WOLAITA ZONE, SOUTHERNETHIOPIA**

**BY: ZEKARIAS ZEMARKU SHANKA  
MAJOR ADVISOR: M.SENAPATHY(PH.D)**

## **ABSTRACT**

*The dairy farm is one of the agricultural activities to the rural farmers. Also, it can make the farm households wealthy by generating the income. The objective of this study was to determine the overall factors affecting adoption decision and the the status of adoption of dairy technologies in Ofa district, Wolaita Zone. Improved dairy technologies (breed, feed, AIS, housing and veterinary services) and training were provided for rural small holder farmers in different time in the study area; but, the major factors that are affecting the adoption of these technologies were not clearly known in the study area. This study was initiated to fulfill the information gap for responsible bodies. Ofa wereda has 21 rural and 2 town kebeles, including 9 Dega, 5 Kola and 7 Woinadega Kebeles. Four Kebeles were randomly selected for the study. The 150(63 adopters and 87 non adopters) sample households were selected by using SRS (systematic random sampling) method. The primary data from these households was collected by using Interview Schedule. Secondary data were collected from different relevant literatures such as reports, research results documents and publications. Descriptive and econometric analyses were used for analyzing both quantitative and qualitative data using SPSS version 21. Also, Focus Group Discussion and Key Informants Interviews were collected to measure the qualitative data. Factors affecting adoption of dairy technologies was analyzed using Binary logistic regression model. The results of Binary logistic Regression model revealed that, dairy technology participant and non-participant households had combination of personal and demographic, economic and institutional influencing factors that hinder the probability of adoption. Among influencing factors, age of the respondents, access to credit, land holding size of households, frequency of extension contact, off-farm income participation, livestock ownership and distance to the nearest market were found to be negatively significant whereas farm income and dairy farming experience were positively significant variables in the model. The recommendations include: technical support to improve the farm productivity and income, experience sharing and field visiting programs to the fields of the early experienced dairy farmers, improvement of the farm land usage, improvement of the road infrastructure in the study area, provision of appropriate and modernized training and extension services etc.*

**Keywords:**-Factor, Adoption, Dairy Technology, Binary Logistic Regression model, Odds Ratio

# **INCOME DIVERSIFICATION AMONG RURAL FARM HOUSEHOLDS IN MELOKOZA DISTRICT, GOFA ZONE, SOUTHERN ETHIOPIA**

**BY: TIRUSEW ABRAHAM**

**ADVISOR: ALMAZ BALTA (Assi.Proff)**

## **ABSTRACT**

*This study was aimed at analyzing the status of Income diversification among rural household in Melokoza Gofa Zone Southern Nations, Nationalities and People Region .The specific objectives of the study were to assess income sources of rural households and its determinants of income diversification of rural households. The data were collected using a cross-sectional survey research design and mixed methods. Systematic sampling technique was employed to generate data from 148 sampled households in Melokoza district, Gofa Zone, Southern Ethiopia. Data were collected using survey interview schedule questionnaire, focused group discussion and Key Informants Interview. In addition, review of government reports and academic papers was made. The analysis was made using descriptive and econometrics model are used to analyze the data. The result shows that 57.2% of the total sampled households depend only on agriculture (crop and livestock production) for their income and contributes 84.8 % from total income. About 5.4% of the total sampled HHs derived their income from off and/or non-farm activities and the contribution of its income was 15.2% and the remaining 37.2% sampled Households Heads diversified income by engaging agriculture with off-farm and/or non-farm activities. The binary logit model result shows from 15 dependent variables 8 variables namely Sex, Family size, Education, Farmland size, Number of livestock size, Access to credit, Extension service and market distance were found to be statistically significant and determines income diversification of farm households. Government should have encouraging farm households to participate Off-farm and Non-farm activities rather than agriculture only by providing different credit access and giving trainings to them.*

**Key Words:** Income Diversification, Househol

# CAUSES AND CONSEQUENCES OF RURAL YOUTH OUT MIGRATION: THE CASE OF LEMOWOREDA, HADIYA ZONE, SOUTHERN ETHIOPIA

BY: FIKREAB MEKEBO

ADVISOR: ASRAT WORKU (ASSISTANT PROFESSOR)

## ABSTRACT

*Out migration affects the socio- economic situation of the youths, families and people at large in a country. The objective of this study was to investigate the causes and consequences of youth out migration from Lemo woreda of Hadiya zone in Southern Ethiopia to South Africa. The study used both quantitative and qualitative methods. Primary and secondary sources of information were used. Primary information was collected from returnees and families of migrants through questionnaire, FGDs and KI guidelines. Relevant literatures, documents, statistics, were used as secondary sources. 100 respondents were selected for survey questionnaire by purposive sampling technique, 40 participants of four Focus group discussions were participated. Descriptive statistical method was employed to analyze quantitative data using SPSS whereas the qualitative data was analyzed using description. The result of the study reported that in Lemo woreda out migration is dominated by young aged 23-29. It found that over 41% of the respondent view that the main pulling cause for the irregular migration was perceived better opportunities in South Africa. The largest proportion of youth migrants have faced imprisonment, hunger and social crises, vulnerability to disease, and loss of life during traveling to South Africa, Dependency on remittance, low educational achievement, loss of life, and shortage of labor force in the origin are among the problems due to migration. Based on these findings recommendations are given to concerned bodies to give due attention to help youths to study and create better job opportunities in their origin.*

**Key words and Expressions:** Youth out migration, irregular migration, returnees, Push factors, Pull factors

### **1.3.Department of Natural Resource Management**

**ADOPTION OF AGROFORESTRY PRACTICES AND THEIR EFFECT  
ON SOME SELECTED SOIL PHYSICO-CHEMICAL PROPERTIES: THE  
CASE OF SIME WATERSHED, KINDO DIDAYE WOREDA, WOLAITA  
ZONE, SOUTHERN ETHIOPIA**

**BY: HIZKEL GOTORO**

**ADVISOR: AKLILU BAJIGO (ASS.PROF.)**

**BELETE LIMANI (ASS.PROF.)**

**ABSTRACT**

*Adoption of agroforestry (AF) practices refers to activities on the ground that uses appropriate tree based practices with respective to land use system for the improvement of soil fertility. This study was conducted to assess adoption of practices and their effects on some selected soil physico chemical properties in Sime watershed in Kindo Didaye Woreda. Purposive sampling technique was used to select the study area and it was used based on the widest presence of agroforestry practices in Sime water shed when compared with other 17<sup>th</sup> water sheds in the Kindo Didaye Woreda. Also the study site selection was made through stratification of area into three with the use of altitude/slope gradients, and agroforestry practices adoption within the water shed namely, upper, middle and lower clusters. In the second stage, sample households from the three slope gradients were selected randomly. Both closed and open ended questionnaires, Focus Group Discussion and Key informant interview used for primary data collection. Two dominant trees species selected in the AF Practices of the study area (*Cordia africana*, *Ficus sur*), and one of the dominant perennial crop species named *Manihot esculenta* crop were purposively selected from each slope gradient for soil sampling from under canopy, and outside canopy for controlling purpose. According to binary logistic regression sex, education, land size, topography, credit access, farming experience, family size and access to training were significantly influenced adoption of AF practices. Some selected trees/crop species had effects on soil properties and it was analyzed by LSD value of soil texture shows that clay and sandy soil textural classes were significantly different between under and outside the canopy area ( $P < 0.05$ ). Some soil chemical properties were analyzed by GLM and they were significantly varied with altitude, sampling location and trees species. The present study demonstrates that *Cordia africana*, *Ficus sur* and *Manihot esculenta* in Sime Watershed have improved soil properties and they can be used as an economically feasible, environmentally friendly and sustainable alternative to maintain soil fertility of the resource poor farmers in similar agro-ecological conditions.*

**Keywords:** Adoption, Agroforestry practices, Slope gradient and Soil Properties.

# EVALUATING SCOPE OF CITIZEN SCIENCE FOR WATERSHED HYDROLOGY IN CHORE MICRO-WATERSHED, OMO-GIBE BASIN ETHIOPIA

**BY: TEKLE DUGUNO**

**MAJORE ADVISOR: ALEMSEGED TAMIRU HAILE (PH.D.)**

**CO-ADVISOR: EFREM GULFO (ASS. PROFESSOR)**

## **ABSTRACT**

*In this study, the scope of citizen science in studying watershed hydrology was evaluated. The community's perception on participating in data collection without incentive and with incentives was assessed. The quality of the data which was collected by citizens was evaluated for estimation of water balance components of a small watershed in Tembaro woreda. The study was conducted in Chore micro-watershed. Focus group discussions (FGD) were organized to initiate citizen science in the micro-watershed. The FGD participants identified citizen scientists based on several criteria including commitment, willingness, education level, proximity to site, gender and the mobility of the volunteers. The citizen scientists participated in data collection without any regular payment but with small and occasional none-monetary incentives. They stated that participation in citizen science increased their knowledge on watershed hydrology including rainfall and runoff processes. Citizen science can be sustainable in the study area through collaboration with different stakeholders, capacity building for observers, and institutional linkage from higher to lower level. Water balance estimation by using citizen data is possible but modification is mandatory because some data (e.g. night floods) were missed during data reading. Therefore, the observation interval should be made flexible to capture important runoff events. The HBV model was satisfactorily calibrated for the study area. The calibrated model was used to study water balance components in the micro-watershed: runoff, actual evaporation and catchment storage. This indicates that citizen science is a viable option to generate hydrological data and knowledge in previously unmonitored watersheds. However, additional research on gender and institutional aspects of it is recommended to mainstream citizen science in Ethiopia.*

**Key words:** Citizen Science, hydrological data, Watershed hydrology, water balance, HBV model.

# **ASSESSING THE DETERMINANT FACTORS OF SUSTAINABLE SOIL AND WATER CONSERVATION PRACTICE: THE CASE OF ANLEMO WOREDA, HADIYA ZONE, SNNPRS, ETHIOPIA**

**BY: GIRMA ABILE**

**MAJOR ADVISOR: MERKINEH M. (ASS. PROFESSOR)**

**CO-ADVISOR: EFREM G. (ASS. PROFESSOR)**

## **ABSTRACT**

*Land degradation is major environmental problem in Ethiopia that affect productivity of land and food security. The study area has been experiencing frequent and chronic food shortage mainly as a result of severe soil erosion. The aim of this study was to assess determinant factors of sustainable soil and water conservation practices in An Lemo Woreda. Descriptive research designs following survey method have been used. Analysis of the determinant variables was done using SPSS (Statistical Package for Social Scientists) software version 20. According to the finding, the current status of study area of the household survey more than 50% of the household heads have been constructed soil bund. Similarly, large household size, age of the respondents, high degree of contact with DAs, extension service help to factor determine farmers' adoption and sustainability SWC activities. Also the study have shown that socio economic characteristics of the household and other institutional factors are responsible for household's perception on soil conservation practices. Perception of soil erosion problem affects the adoption of soil conservation measures significantly, farmers who feel that their farmlands are prone to soil erosion are more likely to adopt physical soil conservation measures. Finally, policy and program intervention designed to address soil erosion problems in the study area need to take in to account.*

**Keywords:** Determinant variables, land .degradation, Soil erosion, SWC and Sustainably

## **1.4.Department of Horticulture**

# **GROWTH AND YIELD OF CABBAGE (*Brassica oleracea* var. *capitata* L.) VARIETIES AS INFLUENCED BY RATE OF NITROGEN FERTILIZER IN DAMOT GALE WOREDA, SOUTHERN ETHIOPIA**

**BY: TILAHUN H/ MARIAM**

**MAJOR ADVISOR: ABRAHAM BOSHA (PHD)**

**CO ADVISOR: W/MARIAM WOELORE (ASS. PROFESSOR)**

## **ABSTRACT**

*Cabbage (*Brassica oleracea* L.) which is a member of the family Cruciferae, and it is an important food and cash crop for smallholder farmers. However, yield of the crop is often constrained by limitation of appropriate varieties and soil fertility problems in the study area. Afield experiment was conducted to determine the response of different varieties and optimum level of N fertilizer on growth and yield of cabbage at Damote Gale in Wolaita Zone, Southern Ethiopia in 2019 cropping season. Treatments consisted of three cabbage varieties (Queen F1, Copenhagen market and Pretoria F1) and four nitrogen fertilizer rate (0, 50, 100 and 150 kg N ha<sup>-1</sup>) combined in factorial arrangement and laid out in Randomized Complete Block Design with three replications. The result showed that varieties and rate of N fertilizer resulted in significant variation on all parameters. The varieties and N rate was significantly ( $p < 0.001$ ) affected plant height, leaf number and unmarketable yield. The interaction of varieties and N fertilizer rate was significantly ( $p < 0.001$ ) affected marketable and total yield. The interaction of varieties and N rate was significantly ( $p < 0.05$ ) affected root length, head length, head diameter, head weight, total fresh weight, dry matter and harvest index. In this study the highest marketable yield was achieved by the variety Queen F1 at rate of 150 kg<sup>-1</sup> N (63.42 t/ha) whereas the lowest marketable yield (6.75 t/ha) was recorded for variety Pretoria F1 at no N fertilizer application. Based on this result, the highest net benefit (246,563 Birr ha<sup>-1</sup>) with MRR 2543.60% was obtained from the variety Queen F1 with 150 kg N ha<sup>-1</sup> application. Therefore, use of variety Queen F1 with 150 kg N ha<sup>-1</sup> could be recommended for cabbage production in the study area. However further investigations may be suggested to be carried out on different soil type, at different season and location so as comes up with precise and comprehensive recommendation.*

**Keywords:** Head cabbage, yield, urea, vegetative growth

# **GROWTH AND YIELD OF ONION (*Allium cepa* L.) AS INFLUENCED BY INTRA-ROW SPACING AND BLENDED NPS FERTILIZER RATES AT HUMBO, WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: TADEME ECHE**

**MAJOR ADVISOR: ABRHAM SHUMBULO (PHD, ASSOCIATE PROFESSOR)**

**CO-ADVISOR: GIFOLE GIDAGO (ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*Onion is one of the most important vegetables and spice crops. Despite its nutritional, cultural and economic value, the production of onion is challenged by many factors among which agronomic practices were the most important in the study area. Thus, field experiment was conducted to evaluate the growth and yield of onion as affected by intra-row spacing and blended NPS fertilizer rates at Humbo in Wolaita Zone, Southern Ethiopia in 2019 cropping season. The study consisted of four intra row spacings (5, 7.5, 10 and 12.5cm) and four levels of blended NPS fertilizer rates (0, 50, 100 and 150 kg NPS ha<sup>-1</sup>) laid out in RCBD with three replications in factorial arrangement. Bombay red onion variety was used as an experimental material. Growth and yield data were collected and analysis was made using SAS software package. Analysis of variances (ANOVA) revealed that the main effects of intra row spacing and NPS rates significantly ( $P < 0.01$ ) affected growth, yield and yield component attributes. The interaction effect of intra-row spacing and NPS fertilizer rates significantly ( $P \leq 0.05$ ) affected plant height, leaf length, leaf diameter, bulb weight, shoot fresh weight, shoot dry matter, bulb dry matter, marketable bulb yield, unmarketable bulb yield, total bulb yield and harvest index Whereas number of leaves per plant and bulb diameter were non- significant. In this study, the highest total bulb yield (32.44 t ha<sup>-1</sup>) and marketable bulb yield (31.12 t ha<sup>-1</sup>) was achieved by the treatment combination of 5cm spacing with 150 kg NPS ha<sup>-1</sup> application rate. The partial budget analysis revealed, the highest net benefit of (437,908 Birr ha<sup>-1</sup>) with MRR of 10,610% was obtained from the treatment combination of 5cm with 150 kg NPS ha<sup>-1</sup> application rates. Therefore, planting onion at 5cm spacing with 150 kg NPS ha<sup>-1</sup> application rate could be suggested for onion production in the study area. Since, this study is limited to one season and location, it should be repeated across seasons and locations to confirm the current results for valid recommendation.*

**Keywords:** Bulb yield, Fertilizer rate, Onion, Vegetative growth

# **RESPONSE OF POTATO (*Solanum tuberosum* L.) VARIETIES TO DIFFERENT RATES OF POTASSIUM FERTILIZER AT DAMOT PULLASSA WOREDA, WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY:AKLILU BANCHA**

**MAJOR ADVISOR: ABRHAM SHUMBULO (PHD, ASSOCIATE PROFESSOR)**

**CO-ADVISOR: GIFOLE GIDAGO (ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*Potato (*Solanum tuberosum* L.) growth and development requires balanced plant nutrients for which yield and qualities of tubers are improved. Field experiment was conducted at Damot Pullassa, Southern Ethiopia during summer season (meher), in 2019, with the objective to determine optimum rates of potassium fertilizer for potato varieties. The experiment was laid out in randomized complete block design with three replications in 4x4 factorial arrangement of four potato varieties (Belete, Gudenie, Jalenie and Local) and four rates of potassium fertilizer (0, 40, 80 and 120 kg K/ha). Analysis of variance showed significant ( $p<0.05$ ) difference for all parameters, except days to emergency. Highest plant height (78.98 cm) and main stem number (7.09) was obtained from Belete variety whereas the longest days to 50% flowering and physiological maturity was recorded from Jalenie variety with 120 kg K ha<sup>-1</sup>. The highest total tuber yield (46.38t ha<sup>-1</sup>) was recorded from Belete with 120 kg K ha<sup>-1</sup> rate of application whereas the lowest total tuber yield (21.08t ha<sup>-1</sup>) was recorded from local variety with control. The highest marketable tuber yield (42.95t ha<sup>-1</sup>) was obtained from Belete with 120 kg K ha<sup>-1</sup> rate of application whereas the lowest marketable tuber yield (17.54 t ha<sup>-1</sup>) was recorded from local variety with no potassium application. The highest average tuber weight (80.55 g/tuber) and (80.47g/tuber) was recorded from Belete variety and 120 kg K ha<sup>-1</sup>, respectively whereas the lowest average tuber weight (51.74g/tuber) and (65.15g/tuber) recorded on Local and no K application, respectively. The highest tuber dry matter content (22.8%), specific gravity (1.094) and total starch content (16.52) were obtained from Gudenie variety. The result also revealed that maximum gross margin (309,240 ETB) and net benefit (283,866.40 ETB) was obtained from Belete variety with 120 kg K ha<sup>-1</sup>. Thus, Belete variety with the application of 120 kg ha<sup>-1</sup> potassium fertilizer could be recommended to the study area for better productivity and highest economic return of potato for growers.*

**Keywords:** Fertilizer, Net benefit, Potato, Varieties, Yield.

## **1.5.Department of Plant Sciences**

# **RESPONSE OF BREAD WHEAT (*Triticum aestivum* L.) CULTIVARS TO BLENDED NITROGEN, PHOSPHORUS AND SULFUR FERTILIZER RATES AT OFFA WOREDA, WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: WORKINEH KUMA ALITO**

**MAJOR ADVISOR: DEREJE SHANKA (PH.D.)**

**CO-ADVISOR: MESFIN KEBEDE (PH.D.)**

## **ABSTRACT**

*Bread wheat (*Triticum aestivum* L.) is an important food crop and source of income for farmers at Offa district in Woliata, southern Ethiopia. Field experiment was conducted at Offa district on farmer's field in 2019 main cropping season to investigate the response of wheat cultivars to application of blended NPS fertilizer rates and to identify and suggest the economically feasible rates of NPS fertilizer for wheat. Factorial combination of two improved bread wheat cultivars (Kakaba and Ogolcho) and five rates of NPS (0, 50, 100, 150 and 200) kg NPS ha<sup>-1</sup> were laid out in randomized complete block design with three replications. Results revealed number of productive tillers, days to maturity, aboveground dry biomass and grain yield were significantly affected by interaction between varieties and NPS fertilizer rate. Length of Spike, seeds per spike and harvest index were significantly affected by the main effect of cultivar and fertilizer rates. Days to heading, days to maturity, plant height, grain yield, aboveground dry biomass, number of productive tillers and thousand seed weight were significantly affected by the interaction effect of cultivars and fertilizer rates. Hectoliter weight was significantly affected by fertilizers rates and interaction. The highest seeds per spike (72.667), thousand seed weight (62.86 g), and aboveground dry biomass yield (10427 kg ha<sup>-1</sup>) were recorded for plants grown on plots applied with 200 kg NPS ha<sup>-1</sup>. Higher grain yield was harvested from Kakaba (4446 kg ha<sup>-1</sup>) cultivar at 100 kg NPS ha<sup>-1</sup> fertilizer rate. Application of 100kg ha<sup>-1</sup> NPS gave the maximum agronomic efficiency while the minimum agronomic efficiency was recorded at control, 50, 150 and 200kg ha<sup>-1</sup> NPS level. The results of partial budget analysis indicated that the highest net benefit of ETB 81130.8 ha<sup>-1</sup> and the marginal rate of return 1555.74% were obtained through the planting of Kakaba cultivar with application 100 kg ha<sup>-1</sup>. Therefore, it can be growing of cultivar Kakeba at rate of 100 kg ha<sup>-1</sup> NPS by farmers in the study area for higher productivity and economic return. However, repeating the experiment across season and location is needed to reach at reliable conclusion.*

**Keywords:** Agronomic efficiency, economic benefit; Yield, and yield component.

**EFFECT OF BLENDED NITROGEN, PHOSPHORUS, SULFUR AND BORON WITH POTASSIUM FERTILIZER APPLICATION RATES ON YIELD AND YIELD COMPONENTS OF COMMON BEAN (*Phaseolus vulgaris* L.) AT BAKADAWULA DISTRICT, SOUTHERN ETHIOPIA**

**BY: MERINEH TAMIRU**

**MAJOR ADVISOR: DAWIT DALGA (PHD)**

**CO-ADVISOR: MESFIN KASSA (PHD)**

**ABSTRACT**

*Common bean (*Phaseolus vulgaris* L.) is one of the most important pulse crop considered as source of food and income for smallholder farmers in Ethiopia. However, common bean production was constrained due to low soil fertility and poor crop management practices were the major constraints for common bean production in the study area. In order to improve productivity, the effect of blended nitrogen, phosphorus, sulfur and boron with potassium fertilizer application rates on yield and yield components of common bean were studied at Bakadawula District, Southern Ethiopia in 2019 main cropping season to evaluate the effect of blended nitrogen, phosphorus, sulfur, and boron with potassium fertilizer application rates and to suggest economically feasible rates of blended nitrogen, phosphorus, Sulfur and boron with potassium fertilizer in Bakadawula District, Southern Ethiopia. The treatments were 4 levels of blended NPSB (0, 75, 150 and 225kg ha<sup>-1</sup>) and five levels of K fertilizer rates (0, 30, 60, 90 and 120kg ha<sup>-1</sup>) and laid out in a factorial arrangement in a randomized complete block design with three replications. Phenological, growth, yield and yield components data were collected and analyzed using SAS software. The result showed that the interaction effect of blended NPSB and K fertilizer application rates were significantly early for days to flowering (40 days), leaf area index (4.45), the highest pods per plant (35.87), seeds per pod (6.7) and grain yield (3444.2.4kg) obtained from 150 kg NPSB and 60kg K ha<sup>-1</sup> application rates. The interaction effects of NPSB and K rates were significantly the highest number of effective nodules per plant (64.33) and agronomic efficiency (19.56%) were recorded from 75kg NPSB and 30kg K ha<sup>-1</sup>. On the other hand, there were significant interaction effect on plant height, the number of main branches, above-ground biomass, and harvest index. The economic analysis indicated that the highest net return 37728 ETB ha<sup>-1</sup> were obtained from blended NPSB 150kg ha<sup>-1</sup> and 60kg K ha<sup>-1</sup> with a marginal rate of return of 273.3%. Based on the results of this study, it could be concluded that a combination of blended NPSB 150kg ha<sup>-1</sup> with 60kg K, ha<sup>-1</sup> application rate to be superior for the production of common bean in the study area.*

**Key-words;** Blended fertilizer, common bean, grain yield, production

**RESPONSE OF FOOD BARLEY (*Hordeum vulgare* L.) VARIETIES TO  
BLENDED NITROGEN, PHOSPHORUS, SULFUR AND BORON  
FERTILIZER RATE AT KECHI DISTRICT, DAWRO ZONE, SOUTHERN  
ETHIOPIA**

**BY: ZENEBE BIRAMO SHUKURO**

**MAJOR ADVISOR: MESFIN KASSA (PHD)**

**CO-ADVISOR: GOBEZE LOHA (PHD)**

**ABSTRACT**

*Barley is an important food crop in the highlands of Ethiopia. However, its productivity is constrained by a number of problems. Among these inadequate uses of fertilizer and lack of improved food barley variety are the most important ones. The field experiment was conducted in Wolaita Sodo University Kechi research site, Kechi district, Dawuro zone, Southern Ethiopia to evaluate the response of food varieties to NPSB fertilizer rates to assess the economic feasibility of fertilizer use in three food barley varieties (BH 1307, EH 1493 and local variety using five different rates of NPSB fertilizer application (0, 50, 100, 150 and 200 NPSB kg ha<sup>-1</sup>). The experiment was laid out as a Randomized Complete Block Design (RCBD) with factorial combinations and replicated three times. The analysis of variance showed that growth, yield and yield components of all varieties increased due to the increasing rate of blended nitrogen, phosphorus, and sulfur and boron fertilizer. Phonological, growth, yield components and yield responded to varieties, NPSB fertilizer rates and their interactions differently. Days to heading and maturity were prolonged for all varieties as NPSB rates increased with the longest day to heading (78.66) and maturity were recorded for variety BH 1307 at NPSB rate of 200 kg ha<sup>-1</sup>. The tallest plant heights (108.1cm) and longest spike length (8.90cm) were observed for variety EH 1493 at NPSB fertilizer rate of 200 kg ha<sup>-1</sup>. The highest number of seeds per spike (46.81) was observed for variety EH1493 at NPSB rate of 150 kgha<sup>-1</sup> whereas the highest Thousand seed weight (41.8) was seen for variety EH 1493 at NPSB rate of 100 kg ha<sup>-1</sup>. The greatest biomass yield (10307) kg h<sup>-1</sup> was obtained from variety BH 1307 at NPSB fertilizer rate of 200 kha<sup>-1</sup> while the highest grain yield 2915.9kg was observed for variety EH 1493 at NPSB rate of 100 kg ha<sup>-1</sup>. This result revealed that variety EH 1493 64104 (birr ha<sup>-1</sup>) with an acceptable MRR 3489.3% and BH1307 the maximum net benefit (63246.58 birr ha<sup>-1</sup>), with an acceptable MRR (4466%) was obtained from 100 kg NPSB ha<sup>-1</sup> fertilizer application of Based on the results of this study, it could be concluded that blended NPSB application rate to be recommended for the production of food barley in the study area.*

**Key words:** Barley, blended fertilizer, growth, yield

# **NUTRIENT UPTAKE, USE EFFICIENCY AND PRODUCTIVITY OF BREAD WHEAT (*Triticum aestivum* L.) AS AFFECTED BY NITROGEN AND POTASSIUM FERTILIZERS IN KEDDIDA GAMELA DISTRICT, SOUTHERN ETHIOPIA**

**BY: TEMESGEN GODEBO UWITO**

**MAJOR ADVISOR: FANUEL LAEKEMARIAM (PHD)**

**CO-ADVISOR: GOBEZE LOHA (PHD)**

## **ABSTRACT**

*Bread wheat (*Triticum aestivum* L.) is one of the most important cereal crops in Ethiopia. The productivity of wheat is markedly constrained by nutrient depletion and inadequate fertilizer application. Therefore, this study was conducted to investigate the effect of nitrogen (N) and potassium (K) fertilizer rates on growth, yield, nutrient uptake and use efficiency during 2019 cropping season on Kedida Gamela Woreda, Southern Ethiopia. Factorial combinations of four rates of N (0, 23, 46 and 69 kg N ha<sup>-1</sup>) and three rates of K (0, 30 and 60 kg K ha<sup>-1</sup>) were laid out in a randomized complete block design with three replications. Source of N is urea (46-0-0) and K is murate of potash (KCl) (0-0-60). The results showed that most parameters viz yield, yield components, N uptake and use efficiency were significant differences ( $P < 0.05$ ) due to interaction effects of N and K. The application of 46 kg N ha<sup>-1</sup> and 30 kg K ha<sup>-1</sup> was resulted maximum grain N and K uptake. Consequently, it was resulted in high grain yield of 4392 kg ha<sup>-1</sup> when compared to the minimum yield (1041 kg ha<sup>-1</sup>) from unfertilized crop. The interaction effects of N and K indicated that significant effect ( $P < 0.05$ ) on flag leaf area, grain N and K uptake and grain yield of wheat. The highest agronomic efficiency of N (52.5) obtained from the application of 46 kg N ha<sup>-1</sup>. Maximum physiological efficiency of N (86.6 kg kg<sup>-1</sup>) and use efficiency of K (58.6 %) was recorded from the interaction of 46 kg N ha<sup>-1</sup> and 30 kg K ha<sup>-1</sup>. The highest net benefit (57,732.5 birr ha<sup>-1</sup>) with marginal rate of return (1718.96%) obtained from interaction effect of 46 kg N ha<sup>-1</sup> and 30 kg K ha<sup>-1</sup>. In conclusion, applying 46 kg N ha<sup>-1</sup> and 30 kg K ha<sup>-1</sup> is suggested for optimum grain yield and economic return to wheat growing farmers of the area. Yet, in order to draw sound conclusion, repeating the experiment over seasons and locations is recommended.*

**Key words:** Economic Return, Growth, Yield and Nutrient Use efficiency

# **RESPONSE OF MUNG BEAN [*Vigna radiata* (L.)Wilczek] VARIETIES TO BLENDED NITROGEN, PHOSPHORUS AND SULFUR FERTILIZER RATES ON GROWTH, YIELD AND YIELD COMPONENTS AT DEMBA GOFA WOREDA, SOUTHERN ETHIOPIA**

**BY: MERINEH MAZARA MATA**

**MAJOR-ADVISOR: DEREJE SHANKA (PhD)**

**CO-ADVISOR: MESFIN KEBEDE (PhD)**

## **ABSTRACT**

*Mungbean is an important cash crop and source of protein rich food for smallholder farmers in Ethiopia. However, low soil fertility and inadequate improved high yielding varieties are the major constraints for mung bean production in the study area. In order to improve productivity of the crop, response of mung bean varieties to different application rates of NPS fertilizer was studied to determine optimum and economically feasible rate of NPS fertilizer at Borda sub-site of Areka Agricultural Research Center during the 2019 main cropping season. A field experiment was conducted using three mung bean varieties (Rasa, NVL-1 and Shewa robit) and four rates of blended NPS fertilizer (0, 50, 100 and 150 kg ha<sup>-1</sup>) in a factorial arrangement by employing randomized complete block design with three replications. Data on phenology, growth, yield and yield attributing traits were recorded and subjected to analysis of variance. Agronomic efficiency and economic analysis of fertilizer rates were also computed for each treatment combination. The results of the study indicated that main effect of NPS fertilizer rate and varieties significantly influenced majority of growth parameters such as primary branches, leaf area, leaf area index, plant height and aboveground dry biomass. Hence, the highest plant height and aboveground dry biomass were obtained with application of 150 kg NPS ha<sup>-1</sup>. Main effects of NPS fertilizer rate also were significant for total number of nodules, effective number of nodules and thousand seed weight. Further, interaction of NPS fertilizer rates with varieties showed significant effect on number of pods per plant, number of seeds per pod, grain yield, number of days to 50% flowering and days to 90% physiological maturity. The highest number of days to 50% flowering (55.33 days) and days to 90% physiological maturity (81.0 days) were recorded from variety Rasa with 150 kg NPS ha<sup>-1</sup>, whereas the highest number of pods per plant (30.8), number of seeds per pod (13.03), and grain yield (1710 kg ha<sup>-1</sup>) was recorded for NVL-1 variety grown on plots applied with 100 kg NPS ha<sup>-1</sup>. Economic analysis also showed that the highest net return (31675 Birr ha<sup>-1</sup>) with acceptable marginal rate of return was obtained from variety NVL-1 grown at 100kg NPS ha<sup>-1</sup>. Therefore, growing of variety NVL-1 at 100kg NPS ha<sup>-1</sup> could be tentatively suggested for the production of mung bean in the study area.*

**Keywords:** Mungbean, Blended Nitrogen, Phosphorus and Sulfur Fertilizer, Grain yield

# **RESPONSE OF COMMON BEAN (*Phaseolus vulgaris* L.) TO RHIZOBIUM INOCULATION AND BLENDED NITROGEN, PHOSPHORUS, SULPHUR, BORON FERTILIZER IN OFA SERE KEBELE, SOUTHERN ETHIOPIA**

**By: MELKAMU DELLA**  
**MAJOR ADVISOR: DAWIT DALGA (PhD)**  
**CO-ADVISOR: DEREJE SHANKA (PhD)**

## **ABSTRACT**

*Low available phosphorus, total nitrogen, lack of adequate information on the use of rhizobium inoculants and nitrogen-phosphorus-Sulphur-Boron blended fertilizer are one of the major yield limiting factors for common bean production in the study area. Thus, the experiment was conducted at Ofa sere Kebele, Sodo Zuria Woreda, Wolaita Zone, Southern Ethiopia in 2019 (June-August), to determine the rates of Blended Nitrogen, Phosphorus, Sulphur and Boron fertilizer rates and types of Rhizobium inoculation on the yield components and yield of common bean and to identify economically appropriate combination of blended NPSB fertilizer rate and type of Rhizobium strain. Treatment combinations were five levels of blended NPSB fertilizer rate (0, 50,100,150 and 200 kg/ha) and two types and levels of Rhizobium inoculation (HB-A15, HB-429 and without inoculation). Randomized complete block design in factorial arrangement with three replications was used. Phenological, growth and yield components & yield parameters were recorded procedurally and analysed accordingly. Results showed combined application of blended NPSB fertilizer and rhizobia strain type had significant effect on plant height, days to 50% flower and days to reach 90% physiologically mature. The highest number of plant height (87.93) and days to maturity (95) recorded at combined application of 150Kg/ha of NPSB and HB-429 types of rhizobia strain. The interaction effect had significant effect on number of effective nodule, grain yield and above ground dry biomass. The combined application of 150Kg/ha of NPSB fertilizer and HB-429 rhizobia strain type had highest number of effective nodule (75.13) and grain yield (3017.7). The economic analysis also indicated that the highest net return of 38298.545 ETB/ha was obtained from combined application of HB-429 type of rhizobia strain with blended NPSB fertilizer rate of 150 kg/ha get marginal rate of return of 3072.5%. Based on the results of this study, it could be tentatively concluded that rhizobium inoculation with application of NPSB rate of 150 kg/ha found to be appropriate for common bean production in the study are although repeating the experiment at different location and season are needed to come up with sound conclusions and recommendation.*

**Key words:** Strain, HB-A15, HB-429, NPSB

# **RESPONSE OF MUNG BEAN (*Vigna radiata* L.) VARIETIES TO NPS RATES AND ROW SPACING AT KINDO KOYSHA DISTRICT, SOUTHERN ETHIOPIA**

**BY: KAWTE KAYSHA KARA**

**MAJOR ADVISOR: DEREJE SHANKA (PHD)**

**CO - ADVISOR: MESFIN BIBISO (PHD)**

## **ABSTRACT**

*Mung bean (*Vigna radiata* L.) commonly known as green gram is an ancient pulse crop. Despite the multiple use of the crop in human nutrition, the crop is not yet introduced in the study area, no information on agronomic practices such as optimum inter-row spacing and fertilizer rate. A field trial was conducted to evaluate the effects of inter-row spacing and fertilizer rate on performance of mung bean varieties at Kindo Koysha District, in 2018. The experiment comprised of 2×3×4 factorial combinations of two varieties (Shewarobit, N- 26), three inter-row spacing of planting (20, 30 and 40 cm × 10 cm) and four NPS fertilizer rate (0, 50, 100 and 150 kg ha<sup>-1</sup>). The experiment was laid out in a randomized complete block design with three replications. The data recorded were analyzed statistically using SAS statistical package and least significant difference test was done at 5% probability level. Accordingly, the main effect of variety was statistically significant difference of the days to maturity and 1000-seed weight observed due to Varieties(p<0.05). Variety N-26 matured (57.75 days) earlier than Shewarobit (59.7 days). Furthermore, three-way interaction effect of variety, fertilizer and row spacing significantly influenced number of seed per pod. The two-way interaction effect of variety with fertilizer rate significantly (P<0.05) influenced phenological, growth yield and yield attributing traits. The maximum plant height (33.6cm), days to flowering (42.27 days), number of branch (3.83), number of pod per plant (14.7), above ground biomass (3303.9 kg), grain yield ha<sup>-1</sup>(1294.7 kg ha<sup>-1</sup>) and harvest index were recorded for N-26 variety at 150 kg NPS ha<sup>-1</sup>. Moreover, economic analysis also indicated that the highest net benefit of 33168.00 ETB ha<sup>-1</sup> was recorded for mung bean variety N-26 grown at 100 kg NPS ha<sup>-1</sup>(30×10cm) row spacing. Based on the result of this study, it can be tentatively recommended that producing variety N-26 at rate of 100 kg NPS ha<sup>-1</sup> for better productivity and higher economic return in the study area. However, since the experiment is conducted only for one season repeating the present study would be imperative to reach at conclusive findings.*

*Keywords: Economic returns, Fertilizer rates, Mung bean, Varieties, Yield.*

**RESPONSE OF MUNG BEAN (*Vigna radiata* L.) VARIETIES TO RATES OF BLENDED NPS FERTILIZER AT KINDO KOYSHA DISTRICT, SOUTHERN ETHIOPIA**

**MULU BAZA EKA**

**MAJOR ADVISOR: DEREJE SHANKA (PHD)**

**CO-ADVISOR: MESFIN BIBISO (PHD)**

**ABSTRACT**

*Mung bean is one of the most important pulse crops in low land area of Ethiopia because of its use as sources of food and cash. However, its average yield reported at national level remains far below the potential yield to be attained. This is partly due to low soil fertility management and inappropriate agronomic packages. Hence, this experiment was conducted to investigate the effect of NPS rates on growth, yield and yield components of mung bean varieties at Kindo Koysha district, during 2018 cropping season. The factors studied were four rates of blended NPS (0, 50, 100 and 150 kg ha<sup>-1</sup>) and four varieties of mung bean (N-26, Shewarobit, NVL-1 and Chinease). These were laid out in a factorial arrangement in RCBD with three replications. Data on phenological, growth, yield and yield related parameters were collected and analyzed using SAS software. The results of the main effects of NPS fertilizer rate showed statistically significant difference on plant height, number of branches and thousand seed weight. Among the varieties, N-26 found to be the earliest maturing variety, while the longest days to 90% physiological maturity (63.33) were recorded for variety shewarobit. Further, interaction of varieties and NPS fertilizer rate had significant effect on days to 50% flowering, number of pods per plant, number of seeds per pod, grain yield, biomass yield and harvest index. Variety N-26 with the application of 150 kg NPS ha<sup>-1</sup> had the highest number of pods plant<sup>-1</sup> (15.46), number of seeds pod<sup>-1</sup> (10.93), grain yield (1241 kg ha<sup>-1</sup>) and above ground biomass yield (3177 kg ha<sup>-1</sup>), which was statistically at par with 100 kg NPS ha<sup>-1</sup>. Moreover, the highest net-return (31,734.30 Birr ha<sup>-1</sup>) with MRR of 772% was obtained from combination of variety N-26 with application of 100 kg NPS ha<sup>-1</sup>. In general, the results showed that the use of 100 kg NPS ha<sup>-1</sup> with variety N-26 found to be highest for the production of mung bean in the study area. However, the experiment was conducted for single season and single location; it also recommended to-repeat the study across representative locations of the district.*

**Keywords:** Grain yield, Mung bean, NPS fertilizer, Varieties,



## **2. College of Business and Economics**

### **2.1. Department of Accounting and Finance**

# **DETERMINANTS OF FINANCIAL PERFORMANCE OF SAVING AND CREDIT COOPERATIVE SOCIETIES: A CASE STUDY OF KUCHA DISTRICT, GAMO ZONE, IN SOUTHERN REGION OF ETHIOPIA**

**BY: GEBEYEHU KAPITANO**

**MAJOR ADVISOR: TARIKU K. (MSc, Asst. Prof.)**

**CO-ADVISOR: MESELE S. (MSc, Asst. Prof.)**

## **ABSTRACT**

*This study examined the determinants of financial performance of saving and credit cooperative societies in Kucha district by using panel data of seven sampled SACCOs out of 34 operated in Kucha district over the period 2015-2019. Since the data is secondary in nature, the quantitative approach to research was used. Besides, the random effect model was used. Under this study, both internal and external factors were included. The internal factors used in this study include capital adequacy, earning ability, liquidity management and management efficiency whereas, the external factor is annually inflation rate. Moreover, return on asset was used to measure the financial performance. This study runs a redundant fixed effect test using Hausman specification test. Hence, based on the result random effect model was adopted. Based on the regression result; capital adequacy and management efficiency have a significant influence on the financial performance of sampled saving and credit cooperatives measured by return on asset. Thus, management bodies of SACCOs should strive to increase the financial liquidity and profitability, reducing the leverage by enhancing loan provision and collection efforts, selling additional shares, minimizing periodic expenses and developing organizational culture by using financial ratios to effectively manage their assets are the possible recommendations.*

**Keywords:** Financial Performance, Saving and Credit Cooperative Societies

**CHALLENGES OF BUSINESS PROFIT TAX ADMINISTRATION: A  
STUDY IN DERASH WOREDA AND GIDOLE TOWN  
ADMINISTRATIVE; SNNPRS ETHIOPIA**

**BY: TESEMA TESFAYE**

**MAJOR ADVISOR: NETSANET BIBISSO (ASSISTANT PROF.)**

**CO-ADVISOR: ANDUALEM UFO (PHD)**

**ABSTRACT**

*The purpose of this paper was to assess the Challenges of business profit tax administration in SNNPRS: the case of Derashe Woreda and Gidole Town Administrative. The main objective of this study was to assess the challenges of business profit tax administration system on Category “A” and “B” taxpayers, evidence from revenue authorities. The research question focuses on which tax administration inputs fulfilled in revenue office, how taxpayers’ identified, registered and upgraded, how tax education and services are rendered, what is the constraint to collect business tax revenue on compliance basis and proper enforcement mechanism. The researcher used descriptive research method and mixed approach (qualitative and quantitative). Purposive sampling approach was used to select the sample size of legally registered 76 category “A”, 36 category “B” business profit taxpayers and 30 tax officials in the Woreda and Town Administrative. A census method was used to cover the total population. The researcher used open ended and closed ended questionnaire, interviews and observations to collect data from primary sources and document review was also employed to collect data from secondary sources. Hence the data result of this study was analyzed and presented using tables, numbers and percentiles depending on the responses of respondents. The result of this study shows that organizational strength of the authorities was not fulfilled in customer service satisfactions, yearly profit tax payment procedure and taxpayer’s compliant handling and responsiveness. The competence of employees was lack of knowledge and there was no fair training opportunity and appropriate per-diem for field works. In addition unsatisfactory budget was allocated for authorities. Besides, the office was not convenient for employees as well as taxpayers. Moreover; authorities uses SIGTAS in the office but there was lack of network and the authorities was not using IT in tax administration function. The revenue authorities have no proper identification and registration of eligible taxpayers and there are several informal businesses in the Woreda and town administrative. The service provided for the taxpayers were not satisfactory, there was no good facility of service deliver and the authorities do not clearly notify and respects the right of taxpayers. The authorities was given tax education, however the afforded tax education does not create enough awareness on tax and tax laws. The total revenue collected per each fiscal year relative to the planned have an increment whereas the tax collected from business profit taxpayers have fluctuation among consecutive years. Non-compliant taxpayers are enforced by education and high penalty. Lastly based on the finding, possible suggestions were given. These involve improving organization strength of the authorities and fulfilling other tax administration inputs, promoting identification and registration of eligible taxpayers and improving taxpayers’ service and education.*

# **DETERMINANTS OF PROFITABILITY OF COMMERCIAL BANKS IN ETHIOPIA: A STUDY ON INTERNAL FACTORS**

**BY: ARAGAW AYALEW FENTA**

**MAJOR ADVISOR: TARIKU KOLCHA (MSC, ASSISTANT PROFESSOR)**

**CO -ADVISOR: MILLION ASSEFA (MSC, ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to investigate determinants of commercial banks profitability in Ethiopia a study on internal factor by using panel data of thirteen commercial banks from year 2010 to 2018. The study employed an explanatory type of research and secondary financial data were used. On this study Return on Asset (ROA) is as a proxy variable for profitability which is considered as the dependent variable in this study. Based on the result of Hausmann specification test the study used fixed effect model. The fixed effect regression model was applied to investigate the effect of bank size, capital adequacy, liquidity risk, operation efficiency, debt management, funding cost, and loan to asset ratio on profitability. The major findings of the study show that, operation efficiency, capital adequacy and bank size have statistically significant and positive relationship with banks' profitability. However, the relationship for liquidity risk, debt management, funding cost, and loan to asset ratio were found to be statistically insignificant. The study suggests focusing and redesigns the firms together with significant key internal drivers of profitability of commercial banks in Ethiopia.*

**Keywords:** Determinants, Internal Factors, Profitability, Commercial Banks

# **FACTORS AFFECTING THE INTERNAL AUDIT EFFECTIVENESS: (IN CASE OF GOFA ZONE FEDs, INTERNAL AUDIT DEPARTMENT)**

**BY: EUNETU ELIKAYE ARRO**

**MAJOR-ADVISSOR: Mr. GAREDEW GANECHO (Assistant Professor)**

**CO-ADVISSOR: Mr. FIKREMARAM ZEREGA (Assistant Professor)**

## **ABSTRACT**

*The function of internal auditing is detection or prevention of errors & frauds by advising the effective internal control systems, and urgency for the Ethiopian organizations. This study was aimed to identify the determinants that affect the IAE specially; in case of GOFA zone FEDs, internal audit departments. The researcher motivated on this study as recommended further investigation on issue by authors (Arena & Azzone, 2009 et.al.) and previously not studied concerns in case area. The finding of this study was used to show the direct effects of quality internal audit, management support, independency internal audit, competent of audit staff, and approved IA chart on the internal audit effectiveness of FEDs. The 6 administrative out of 9 targets was selected using purposively sampling technique. 108 respondents as sample size were selected from 144 target respondents and the internal auditors and other related FED staffs were participated. The primary data's obtained through structured questioners; and analyzed by using SPSS-20 statistical software. Demographic data were analyzed descriptively; and the relationships among the study's variables were examined by using the correlation and regression results. According to the regression output, the quality internal audit, competent of audit staff, and independency internal audit, were contributed for the internal audit effectiveness in the FED sector significantly and positively whereas, management support and approved IA chart have no statistically significant effects and positive relationship with the internal audit's effectiveness. FEDs to add values and wisly utilize scarce resource have support and capacitate the IAs to IAE. The IAs, the BoFED and the educational institutions have assignments on concern of FEDs facilities to IAD make modernize with electronic systems, further studies concerns respectively to IAE in FEDs.*

**Key words:** Internal auditing effectiveness; internal audit quality, management supports, internal auditor's independences, competent of audit staff and Approved audit chart.

# **THE EFFECT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY: THE CASE OF SELECTED BOTTLED WATER FACTORIES IN ETHIOPIA**

**BY: NIGATU DANA CHIGE**

**MAJOR ADVISOR: TARIKU KOLCHA (ASSISTANT PROFESSOR)**

**CO-ADVISOR: NETSANET BIBISSO (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to examine the Effect of Working Capital Management on Profitability: the Case of Selected Bottled Water Factories in Ethiopia. In light of this objective, the study adopted quantitative approaches to test research hypotheses. Financial statements of a sample of twenty five (25) selected bottled water factories in Ethiopia were used for a period of five years (2014-2018) with the total of 67 observations. The data was analysed using descriptive and multiple regression analysis (Ordinary Least Square) method and Statistical Package for Social Sciences (SPSS) version 20.0. Purposive sample was used. It examined the components in working capital such as average collection period, average payment period, cash conversion cycle and inventory conversion period in relation to return on asset (ROA). In addition the study used current ratio, used as liquidity indicator; firm size, as measured by logarithm of sales and firm leverage, as control variables. The key findings from the study are; Firstly, there exists a significant negative relationship between average collection period and profitability indicating that an increase in the number of days a firm receives payment from sales affects the profitability of the firm negatively; secondly, there exists a significant negative relationship between inventory conversion period with profitability and significant positive relationship between average payment period and profitability indicating that holding inventory for longer periods reduces profitability and delaying paying creditor's increases profitability. Thirdly, there exists a constant relationship between cash conversion cycle and profitability of the firm. This means cash conversion cycle had no effect on profitability of the firms'. Finally, the study examined that firm size and liquidity had a significant positive relationship with profitability but firm leverage had an insignificant positive relationship with profitability. The study concluded that working capital management affects profitability of bottled water factories in Ethiopia and recommended that bottled water factories managers should avoid holding excessive stock, speed up receivables collection and delay paying creditors to maximize profitability.*

**Keywords:** Working Capital Management, Profitability, Bottled Water Factories

# **FACTORS DETERMINING COMMERCIAL BANK DEPOSIT: AN EMPIRICAL STUDY ON COMMERCIAL BANK OF ETHIOPIA**

**BY: WOGASO WORU**

**MAIN ADVISOR: GAREDEW GANECHO (ASSISTANT PROFESSOR)**

**CO-ADVISOR: MILLION ASSEFA (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The core objective of commercial banks in Ethiopia is to make profits and satisfy the needs of the respective owners. Making of profits depends on the strategies adopted by each bank to mobilize deposits from the public that is an input to earn income for banks. In order to make good strategies, however, banks should know what factors determine the deposit mobilization activity in the real world. Therefore, this study was intended to identify and evaluate those factors determining Commercial bank deposit by taking Commercial Bank of Ethiopia as evidence. In order to achieve this objective the study adopted mixed research approach. From many types of non-probability sampling methods, the study was used purposive sampling method to select the target district and branches. The study used both primary and secondary data. Regarding to secondary data; the study referenced to commercial bank of Ethiopia on basis of data covers nineteen years (2000GC up to 2018GC) period and the data were collected from National Bank of Ethiopia and commercial bank of Ethiopia. The multiple regression models were applied and hypothesis testing was performed using SPSS software. The six independent variables are regressed with the dependent variable. Result from using ordinary least square regression exhibited that four independent variables were significant and two were insignificant relationship with commercial banks deposit. Regarding primary data; the study used questionnaire and interviews from the employees and managers of sampled commercial bank of Ethiopia districts. The target population was all selected districts under commercial bank of Ethiopia. Currently out of the fifteen districts exist under CBE, three districts have been purposively selected for the study. Results from questionnaires and interview on management efficiency and social stability have had an effect on commercial bank of Ethiopia total deposit. Finally the study suggests that Ethiopian commercial banks specifically commercial bank of Ethiopia should open more branches in order to more accessible to the society, as the same time to increase their deposit and provide quality services of the commercial bank of Ethiopia through door to door activities.*

**Keywords:** Bank Deposit, Commercial Bank of Ethiopia, Determinant of Bank Deposit

# ASSESSMENT OF FACTORS AFFECTING INVENTORY MANAGEMENT PRACTICES: THE CASE OF SELECTED PUBLIC ADMINISTRATION CENTERS IN DAWURO ZONE, ETHIOPIA

BY: BEKELE HAILE SALFAKO

MAJOR ADVISOR: BIRHANU ALEMU (ASS PROF.)

CO-ADVISOR: NETSANET BIBISSO (ASS.PROF)

## ABSTRACT

*Inventory management is the control of materials used and stored in an organization with the objective of providing exactly what is required where and when it is required employing a minimum of residual stock and thus incurring the least possible cost. The main goal of inventory management is to ensure that materials are available in adequate proportions and on a timely manner. The objectives for the study included; to identify the existing practices and to assess the external factors that affect IMP in selected public administration centers. The population targeted was two hundred forty two (242) in 6 selected public administration centers in Dawuro zone. A cross-sectional research design was used for this study. The sample sizes of 151 respondents from six administration centers were selected. Both qualitative and quantitative data analysis were undertaken in this study. It was analyzed using SPSS Version 25. Data was presented through means, group means, and standard deviations. Percentage, tables, and graphs were used to analyze data. From the study findings, it was concluded that the selected case centers IMP were affected by inventories identification, receiving and inspection, issue sequence of inventories, inventory records, accounting and reporting, inventory taking and control and inventory storage used in managing their inventories practices. The case centers underscored the critical role played by IMP hence they used them to enhance their quality of services. The study recommends that the public administration centers better to initiate a consideration of all the practices with a view of identifying the most important IMP based on the line of their quality services in order to ensure that they are fully practices in order to save on costs while improving services. The IMPs evaluated and a bench mark for each established so that their practices is monitored and supervised in order to yield the desired results. The case centers is recommended to organize for training and workshops where managers can be trained on new insights on IMPs with a focus on creating value and dealing with employees for inventory management.*

**Keywords:** Inventory management, public centers, inventory accuracy, and stock recor

# **CHALLENGING FACTORS TO COLLECT VALUE ADDED TAX AND TURN OVER TAX USING CASH REGISTER MACHINES: A STUDY ON WOLAITA SODO TOWN ADMINISTRATION**

**MEBRATU PAULOS KABA**

**MAJOR ADVISOR: TARIKU KOLCHA (ASSISTANT PROFESSOR)**

**CO-ADVISOR: ANDUALEM UFO (PHD)**

## **ABSTRACT**

*This study was conducted to assess the challenging factor to collect VAT and TOT using cash register machines in the case of Wolaita Sodo Town administration. It has investigated to answer various factors (knowledge and skills, attitude and perception, tax evasion, audit follow up and administration cost) that affect TOT and VAT revenue from the view point of TOT and VAT payers. To achieve the objectives of study, both primary and secondary sources of data were used. Using stratified random sampling methods, 210 Value added VAT payers, 57 Turn over Tax payers and 18 tax experts were selected from total functional population of 1145 with 98% return rate that means 285 respondents returned questionnaires and the remaining 2% respondents did not return questionnaire. The collected data through questionnaires were summarized and analyzed using both descriptive statistics to measure central tendency, and inferential statistics (multiple linear regression model) to investigate the predictors effect on VAT and TOT Revenue, through regression analysis and Pearson product moment correlations to determine each independent variables impact on the dependent variable using EVIEWS 9.1. The findings of this research were VAT and TOT collection using the cash register machine has a positive effect on VAT and TOT revenue and independent variables (knowledge and skills, audit follow up, operational cost, and tax evasion) have a significant effect on VAT and TOT Except independent variable perception and attitude at 5% level of significance. Since knowledge of the VAT and TOT tax payer is significant to eradicate the VAT and TOT evasion and can improve the efficiency of the authority but MoR doesn't work with regard to making adequate awareness. This can be possible if MoR give training to VAT and TOT tax payers. Besides to that strong audit follow up is a very significant component to increase VAT and TOT revenue and to decrease VAT and TOT evasions. So, MoR required audit follow up on a VAT and TOT tax payers registered organizations (business owners). MoR is improved to designed good and fast systems that can reduce the operation and maintenance cost of users of the machine to make corrections for their errors without wasting time and additional cost.*

**Keywords:** Cash Register Machine, Value Added Tax, Turn Over Tax, Knowledge, Tax Evasion, Audit Follow up and Costs

# **THE EFFECT OF FINANCIAL LITERACY LEVEL OF OWNERS ON THE PERFORMANCE OF MICRO AND SMALL ENTERPRISES (THE CASE OF SODO TOWN ADMINISTRATION, WOLAITA ZONE)**

**BY: TEFERA LUGO**

**Advisor: NETSANET BIBISO (Assistant Professor)**

## **ABSTRACT**

*This research is entitled as “The Effect of Financial Literacy Level of Owners on the Performance of Micro and Small Enterprises (The Case of Sodo Town Administration, Wolaita Zone)”. It was conducted for partial fulfillment of the requirement for the Masters of Science degree (MSc) in accounting and finance. To that end, an explanatory research design and qualitative and quantitative research approach were implemented. The study has had used both primary and secondary data sources. To draw samples from the target population of the study, both probability and non-probability sampling techniques were used. Each of them was applied under appropriate conditions. MSE were stratified across each sectors as Construction, manufacturing, service, urban agriculture and merchandise. Hence, the stratification was accompanied with probability proportional to size sampling. The selection of actual participant owners was based on purposive sampling technique. In the course of data collection questionnaire was used. The collected data had undergone an analysis of both qualitative and quantitative kind. Simple statistical data presentations and tests as well as complex econometric models as binary logistic and multiple linear regressions were used in the study. The study has examined the financial literacy of the MSE owners in terms of financial knowledge, financial behavior and financial attitude. Factors affecting the financial literacy of the business owners were identified altogether. The performance of the MSE was assessed and effect of the financial literacy on the performance was studied. Specifically, the study has revealed that the owners of micro and small enterprises are poorly literate in finance aspects. This is true for subdivisions in financial literacy elements, financial knowledge, behavior and attitude. Financial literacy was found not associated with gender, age and education levels of the owners. It is significantly associated with enterprise category, ownership modality, years spent in business and member’s role in the enterprises. The study has found no difference in mean profit between micro and small enterprises. Finally, the study has indicated that enterprises’ performance is strongly and significantly correlated with financial literacy elements. The conclusion is enterprises performance can be significantly predicted from financial literacy elements. There upon the finding, the study has recommends financial educations, training and workshops to be concerted to boost the financial literacy of the enterprise owners.*

**Keywords:** Financial knowledge, behavior and attitude, performance

**PRACTICE, PERCEPTION AND CHALLENGES OF CATEGORY “ C”  
TAX PAYERS’ TAXATION IN ETHIOPIA: IN THE CASE OF  
WOLAITA ZONE**

**BY: CHERNET TADESSE**

**ADVISOR: - BIRHANU. ALEMU (ASSISTANT PROFESSOR)  
CO-ADVISOR:- GAREDEW GANECHO (ASSISTANT PROFESSOR)  
ABSTRACT**

*The main objective of this thesis was to assess practice, perception and challenges of category C tax payers’ taxation in Ethiopia: In the case of Wolaita Zone. The research approach adopted is mixed in which both qualitative and quantitative data were used, the population of the study was category C tax payers in Wolaita Zone .Among the entire zonal category C tax payers, 395 samples were selected. From the samples, 375 were selected for questionnaire while 20 officials were selected purposively for interview. This study used descriptive research design and analyzed the data obtained from primary and secondary sources descriptively by using tables, graphs, percentiles and SPSS version 20 statistical package. This study reveals a number of findings including the lack of knowledge of tax payers and tax assessment committees, the presence of nepotism, saving problem of tax payers, failure to resolve complaints on time, the presence of high tax rate ,the presence of illegal businesses noted to be major challenges. Moreover the finding revealed that the tax system is complex and unfair, unfair treatment by officers and the presence of different problems in administering category C tax payers in the tax authority. Finally, the researcher recommended a series of measures which could be taken by the government in general and tax authorities in particular. Some of these measures include: clarifying tax policy and administration issues; Ethiopian Revenue and Customs Authority is suggested to give intensive and repetitive training to improve the knowledge and attitudes of tax payers.*

**Keywords: - Tax, Taxation, Category “C” tax payers**

# **DETERMINANTS OF INTERNAL AUDIT EFFECTIVENESS IN THE PUBLIC SECTOR: CASE OF WOLAITA ZONE ADMINISTRATION, SNNPR, ETHIOPIA**

**BY: BELETE BINE**

**MAJOR ADVISOR: BEREKETSORSA (ASSISTANT PROFESSOR)**

**CO-ADVISOR: MILLIONASSEFA (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The main purpose of this study was to investigate on the factors that affecting internal audit effectiveness in the selected wolaita zonal administration public sector Offices. This investigation was focused on 6 purposely selected public-sector Offices that are expected to represent all other sectors (wolaita Zone Finance & Economy Development Office, Sodo City Finance & Economy Development Office, Sodo Zuria Woreda Finance & Economy Development Office, Areka City Finance & Economy Development Office, Areka woreda Finance & Economy Development Office and Damot Sore Woreda Finance & Economy Development Office). The source of the required data to the researcher was the Internal Audit staff and managers across the selected public sectors. The data collected using a Likert-Scale type questionnaire were distributed on a sample of the population of the study and filled out by 51 internal auditors and 14 managers, totally 65 out of 69 were filled. Descriptive analysis, correlation analysis, and multivariate regression model through and SPSS version 23 evaluates the relevance between the dependent variable:(effectiveness of internal audit department) and its seven main independent variables: (management support, management's perception of internal audit values, organizational independence of internal auditors, placement of adequate and competent internal audit staff, and the presence of approved internal audit charter). A number of results were reached by the study; Among these two of the predictors ; such as Management perception on internal audit and Following-up of anti-corruption unit have inverse relationship to the Effectiveness of internal audit, But the other 5 predictors :Management support ,Organization independence, Adequate and competent internal audit staff , the presence of adequate approved internal audit charter and Public Finance chief accountant have positive relationship to the effectiveness of the organizations. It helps the organization to accomplish its objectives by bringing a systematic/disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.*

**Keywords:** Internal Audit effectiveness, Management support, Management perception, Independency of Organization, Adequate Internal audit charter.

# **CHALLENGES OF SMALL AND MIDUM SCALE ENTERPRISE LEASE FINANCING, THE CASE OF WOLAITA ZONE**

**BY: TEWABECHTERACHE**

**MAJOR ADVISOR: MILLION ASEFFA**

**CO-ADVISOR: ANDUALEMUFO (PH.D.)**

## **ABSTRACT**

*This paper was aimed at assessing and identifying the challenges of small and midium scale enterprise lease financing. The Small and Medium Enterprise play a vital role in development of our country and at the same time Small and Medium Enterprise lease financing is the new and infant mode of financing in the country. Due to this fact, the Small and Medium Enterprise was perceived to face challenges in lease financing. The population of the study was small and medium scale enterprise in study area and purposive sampling design was used. Questionnaire, key informant interview and document review were used as data collection instrument. Summary statistics from Statistical package for social science version 25 was used as analysing tool for the data collected through questionnaire from Small and Medium Enterprise. Based on the result, the study has had identified challenges that the Small and Medium Enterprise faces such as, lack of government support, coordination of stakeholders and follow ups; absence of adequate infrastructure like shelter/cluster, water, electricity, market chain; lack of proper and sufficient suppliers of capital goods, poor quality and expensive pricing of equipment's being delivered by supplier/lessor; lack of SME's awareness on lease financing system; lack of knowledge about Small and Medium Enterprise Lease financing. The study also identified that supplier takes long period of time to provide capital goods for enterprise. The study has given recommendation to three parties who are directly concerned with Small and Medium Enterprise lease financing based on the nature of identified problems so that they can use their research as input to give solution or cover way to solution of the underlined problems. These parties are the Small and Medium Enterprise, the government of Ethiopia and supplier of the lease financing (lessor). Since Small and Medium Enterprise lease financing is government development program most of the challenges have highly recommended that they should catch eyes of government while the remaining two parties have also recommended for their own issues to take into consideration.*

**Keywords:** Leasing, lease finance, equipment leasing, capital goods finance.

# **IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF DAMOTA WOLAITA FARMERS' COOPERATIVE UNION, WOLAITA ZONE, SNNPR, ETHIOPIA**

**BY: BELAYNESHABOMA**

**ADVISOR: MR. MESELE KEBEDE (MSC, ASSISTANT PROFESSOR)**

## **ABSTRACT**

*Working Capital mainly represents the current assets of a firm which is the portion of financial resources of business that changes from one type of resources to another during the day -to-day execution of business. The impact of working capital on firm profitability aims at maintaining an finest balance between each of the working capitals, that is; Current ratio, cash conversion cycle, debt ratio, sales growth, account collection period, and account payment periods are fundamental parts of the overall corporate strategy to create value and is an important source of competitive advantage in businesses DeLoof,( 2003). The main objective of the study was to examine the relationship between working capital management and profitability in Damota Wolaita Farmers` Cooperative Union. The entire population used in this study meant for WDFCU for the period of five years from 2013 to 2017. The quantitative research approach was employed to arrive at the findings of the study. From the regression models, the study found out that debt ratio and Account collection periods had negative relationship with Return on Asset which means that WDFCU profitability can be decreased by increased debt ratio and account collection periods. Cash Conversion cycle and Current ratio, sales growth and Account payment periods showed significant and positive relation with Return on Asset showing that profitability can be increased with higher sizes of them. The study recommends that the DWFCU need to have better cash conversion cycle by improving collection of accounts receivable, moving inventory faster and paying it supplier longer, to not affect its profitability. It suggested that, when profitability going to be decreased with increased average collection periods. Therefore, the manager would be encouraged keep its customers credit period shorter in order to increase the profitability. And also DWFCU should have lower payment period, to increase its profitability.*

**Keywords:** Working capital management, Profitability, Cash Conversation cycle, Current Ratio, Debt Ratio, Sales Growth, Average collection period, Average payment period and return on asset.

# FACTORS AFFECTING EFFECTIVENESS OF TAX AUDIT IN WOLAITA ZONE REVENUE AUTHORITY

BY: GETAHUN KEBEDE

ADVISOR: MESELE KEBEDE AND MILLION ASEFA

## ABSTRACT

*The purpose of this study was to investigate factors affecting effectiveness of tax audit in wolaita zone revenue authority. The research design selected for this study was explanatory. To test a series research hypothesis, in this study, mixed research method was applied. Specifically; the study used survey of questionnaire analysis in wolaita zone revenue authority on tax auditors, top management, tax assessment officer and interview analysis on team leaders. To achieve the objective of the study, the researcher used Census method to select the survey respondents. Because Census method is most reliable for data collection than sampling techniques especially if the number of population is small. The study of population/participants was 61 would include 29 tax auditors, 4 team leaders, 16 top management, and 12 tax assessment officer of Wolaita Zone Revenue Authority. Data were then analyzed on quantitative basis using Pearson's correlation, multiple linear regression analysis and descriptive statistics. Qualitative data by interview and documentary evidences summarized and presented. The results showed that there is no statistical significance negative relationship among tax administration capacity, auditee attributes and tax audit effectiveness. The researcher found that there is significant and positive relationship among audit quality, top management, organizational independence and tax audit effectiveness.*

**Keywords:** Tax audit effectiveness, audit quality, tax administration capacity, top management support, organizational independence, auditee attribute and tax payers' attitude.

# **FACTORS AFFECTING LIQUIDITY OF COMMERCIAL BANKS; THE CASE OF SELECTED COMMERCIAL BANKS IN ETHIOPIA**

**BY: NEWAY IRASHO**

**ADVISOR: - MESELE KEBEDE (ASSISTANT PROFESSOR.)  
TARIKU KOLICHA (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*Ensuring optimal level of liquidity is the main concerns of commercial banks since it is crucial for its existence. Hence, the main objective of this study was to study and examine factors affecting bank liquidity of commercial banks in Ethiopia. In order to achieve the research objectives, data were collected from a sample of eight commercial banks in Ethiopia over the period from 2006 to 2018. Bank specific and macroeconomic variables were analyzed by using the balanced panel fixed effect regression model. Bank's liquidity is measured in two ratios: liquid asset to deposit and loan to deposit ratios. Results of panel data regression analysis revealed that, profitability, management efficiency and loan growth has negative and statistically significant impact on liquidity; while liquid asset and capital adequacy has positive and statistically significant impact on liquidity of Ethiopian commercial banks. However, nonperforming loan, funding cost, inflation, unemployment and real GDP has no statistically significant effect on the liquidity of Ethiopian commercial banks. Thus, the study suggests that firm-specific factors are more important than macroeconomic factors in determining the Ethiopian commercial banking liquidity. The implication of these findings is that the National Bank of Ethiopia needs to strength legal requirements and give special emphasis on the above ratios to ensure a sustainable liquidity of the commercial banks. This will help to create a stable banking and financial sector that provides a conducive environment for sustainable economic growth and development.*

**Keywords:** Ethiopian commercial banks, funding cost, Fixed Effect Regression Model, liquidity ratio, management efficiency, unemployment rate

## **2.2.Department of Economics**

# **DETERMINANTS OF HOUSEHOLDS CHOICE FOR HEALTH CARE SERVICE PROVIDERS: A CASE STUDY IN WOLAITA SODO TOWN SOUTHERN ETHIOPIA**

**BY: FIKRU JATANA JABO**

**ADVISOR: MITIKU AYELE (PH.D.)**

## **ABSTRACT**

*This study aimed to analyze the determinants of household's choice for health care service providers in WST using household data from six kebbles by used multinomial probit model. The sample of the study was selected using sampling technique. For this study, kebeles were selected by random probability sampling and interview household by systematic random sampling and the sample size, a simplified formula provided by Cochran. A self administered questionnaire was used to collect data between January and February 2019. The study revealed the statistical significance of household size, Health insurance member of household head, distance, money cost, number of days suffering, availability of drug, waiting time, household income, ,quality service and severity of illness, were statistically significant which were negative and positive relationship with determinants of households choice for health care services providers. To increase the household's choice for health care services providers in each institution, the study recommends policies that aim to improve public institutions service such as introducing health care service facility such as drug trend professionals to improve quality service. Other major recommendations of the study include increasing government funding to town public health facilities so as to ensure the availability of drugs and implementing income generating projects to improve town poor and female headed household's household incomes.*

**Keywords:** Choice for health care service, health care service providers, multinomial probit Model

# **THE EFFECT OF INTERNATIONAL MIGRANT-REMITTANCES ON HEALTH AND EDUCATION OF THE FAMILY LEFT BEHIND IN ANGACHA WOREDA; KEMBATA TEMBARO ZONE; SOUTHERN ETHIOPIA**

**BY:KIDANE W/SILASSE**

**ADVISOR: DR. AKRAM (PHD)**

## **ABSTRACT**

*Migrant remittances have both direct and indirect effect on the welfare of the population in the migrant sending countries. The objective of this study was to analyse the effect of international migrant remittance on the health and education status of family left behind in Angacha woreda, south Ethiopia. A cross-sectional quantitative study design was conducted. A total of 207 respondents were selected by purposive sampling technique to select four kebeles and finally simple random sampling technique was applied to get representative households. Structured schedule interview questionnaire was used to collect reliable information and also the data was analysed by using Stata version 11 and the study used binary logit and multiple linear regression models to show the impact of remittance on human capital formation. According to the logit result among other findings, as family size increases, the higher would be the probability of the household receiving international remittance income. The probability of school dropout by any member of the household receiving remittance income is nearly 10 times as high as that of absence of school dropout by members of the household, citrus paribus. Furthermore, the multiple linear regressions for household annual average expenditure on health as affect variable of remittance shows that remittance income is significantly and positively predicting annual expenditure on health. Thus, the concerned body should focus on human capital development by controlling school drop-out of pupils via community mobilization and awareness creation interventions in the study area, among others.*

**Keywords:** Remittance, Health, Education, Binary Logit, Angacha Woreda.

# **DETERMINANTS OF HOUSEHOLDS WATER CONSUMPTION: A CASE STUDY OF WOLAITA SODO CITY**

**By: - WOGASO WONTE**

**Advisor: - DAWIT HAYESO (PhD)**

## **ABSTRACT**

*Growing populations and lack of available cost effective supply augmentation options make reliable estimates of water demand important for policy making. The interest of this thesis was to assess determinants of household's minimum world standard water consumption in wolaita sodo city, southern Ethiopia. Understanding the variables that determine household's water demand helps the water supply utilities, governments and policy makers in their efforts of demand management and expanding service delivery to the un-served sections of the city. The factors that were hypothesized to affect household water consumption were: income of household heads, price of water, educational level of household heads, distance of water from home, family size, house ownership, quantity of water used, seasonal variation of water, willingness to pay age of household, gender, marital status, age of household, source of water, occupation of household, years of stays in the area. Data from 201 households were collected and analyzed using STATA 13. Descriptive Analysis were used for the descriptive results and explaining the linear relationships between the variables. probit regression analyses was used to determine factors explaining household's determinants of water consumption (more specifically water used) of the surveyed households. The analyses indicated that income; house ownership, family size, distance and educational status of the household head, seasonal variation, age of households, years of stay, source of water and gender of house head were statistically significant predictors of households' water consumption in the study area. Hence, monthly income and better education showed that people are better aware of the health benefits of reliable water and are able to obtain it. As distance and price of water increases, people sort other means regardless of the reliability of the water. People who are living in their own houses are more likely to be connected to pipe connection than those living in a rented apartment and expanding water supply service, educating and providing awareness to the society as well as encouraging private partnership in water supply service would be recommended to whom it my concern to minimum standard of water consumption which is prescribed by WHO.*

**Keywords:** Households water demand, determinant factors, probit regression models, Wolaita, Ethiopia standard water consumption.

**DETERMINANTS OF FORMAL LOAN REPAYMENT  
PERFORMANCE OF WOMEN BORROWERS IN AMHARA CREDIT  
AND SAVING INSTITUTION IN GUAGUSA SHIKUDAD DISTRICT OF  
AMHARA REGIONAL STATE**

**BY: YIHUN ADDIS**

**ADVISOR: MITIKU AYELE (PHD)**

**ABSTRACT**

*The study was aimed at identifying and examining determinants of formal loan repayment performance of women borrowers in Amhara credit and saving institution (ACSI) in Guagusa Shikudad District. In this study, 6 kebeles were selected using lottery method of simple random sampling technique from 14 total kebeles. The researcher collected primary data from 254 randomly selected borrowers using semi-structured questionnaire relate to defaulter and non-defaulter stratum in sample kebeles. In addition, the researcher collected secondary data from different organizations and pertinent publications. The researcher employed descriptive statistics and regression analysis to achieve the objects. The study employed a binary logistic regression model to identify determinants of loan repayment performance of women. Accordingly, 19 explanatory variables were included in the empirical model. Among these; education level, total livestock holding, experience in credit use, saving before getting loan in ACSI, other sources of income, repayment period suitability, timeliness, and training were found significant and positively influence loan repayment performance. While loan amount, expenditure on social festivals and loan purpose were found significant and negatively influence loan repayment. The researcher tested multicollinearity and association among all explanatory variables. So, consideration of determinants of loan repayment performance is vital because it provides information that would enable to undertake effective measures with the aim of improving loan repayment performance and hence helped lenders such as microfinance institution and policy makers to have knowledge as to where and how to channel efforts to minimize loan defaults through microfinance institutional policy.*

**Keyword:** *Binary logit, Determinants, Loan repayment, MFIs, Women Borrowers*

## **2.3.Department of Management**

# **DETERMINATES OF SAFETY NET PROGRAM HOUSEHOLD GRADUATION PERFORMANCE**

**BY: FITSUM MERINEH**

**MAJOR ADVISOR: MENGESTU MATINO (ASST. PROFESSOR)**

## **ABSTRACT**

*The main objective of this study was to identify factors affecting Productive Safety Net program (PSNP) household graduation performance demab Gofa district of Gofa Zone SNNPR, Ethiopia. Primary and secondary data were used to collect for this study. The survey data was collected from 246 sample program beneficiary household heads in three kebele grouping them in to cluster. The data were analyzed using both the descriptive analysis and the econometric model .Eight out of twelve variables become significant at 95% and more level of confidence were included in binary logistic regression analysis. These includes' educational status, the full family targeting, participation in credit and the households perception towards graduation, dependence ratio, training, participation in off frame income activity and grievance handling mechanize. These variables were separated and jointed importance in explaining the outcome variable. Major findings a unit increase in household's family size and household dependence ratio improved the graduation performance probability by4.803or 48%,and 11.4 unite at their mean value respectively. On the other hand in the discreet variables, a shift from partial to full family targeting, non-participant to credit-participant , off-farming income generating activities and from unwilling to willing to be graduated, improved the household level of graduation performance by 7.516,.115, 5.475, and 3.823 respectively holding other things constant respect. Finally major recommendations were presented based on the above findings; provision of education at every level training for skill especially for people at working age, changing in system of management of the program, supporting creation of employment opportunities and working against psychology of dependency syndrome, increasing the amount of credit for the program were among the recommendations to the improving graduation performance of the program and additionally ensure federal and regional budgets and development plans are appropriate and adequate to meet graduation targets*

Keywords: PSNP, Graduation, performance, Household,

# **DETERMINANTS OF CONTRACT MANAGEMENT IN PUBLIC SECTOR CONSTRUCTION BIDDING SYSTEM: A CASE STUDY OF DERASHE SPECIAL WOREDA**

**BY: ATNAFU TESFAYE**

**ADVISOR: LIDETU ALEMU (ASS.PROF.)**

## **ABSTRACT**

*This study focused on investigating determinants of contract management in public sector construction bidding system. Persisting problems of inferior quality of constructed facilities, high incidence of claims and litigation, and frequent cost and schedule overruns have become the main features of public construction works contracts. It is in this perspective that this study to identify determinants of contract management in public sector construction bidding system in Derashe Special Woreda public sectors. This research would be use descriptive and explanatory research design. The target population was taken from most common public sector construction projects were schools, health centers, farmers training centers, water/sanitation projects, hospital building, water calbert and administrative offices undertaken construction projects at Derashe Special Woreda. Purposive sampling technique was used to sample the sectors handed construction who were the key informants in this study. The researcher use both probability and non probability sampling. Census was used to select list of respondents. Questionnaires and interview were used to collect data which would be analyzed both quantitatively and qualitatively. Upon completion of the data collection exercise, all completed research instruments were assembled, coded, summarized, entered into the computer; and analyzed by using the statistical package for social science (SPSS). Both descriptive and inferential statistics were used for analysis. Qualitative data would be analyzed using content analysis. Multiple regression analysis was used to determine whether independent variables can be used to test the relationship between the variables of the study. The questionnaire data were analyzed using statistical techniques SPSS version20 which included descriptive statistics, mean, standard deviation, correlation, coefficients and ANOVA analysis. The study made recommendations that Derashe Special Woreda public sector head offices focus on planning, knowledge professional, approval of budget and the existing government bidding criteria needed some improvement. Therefore, the researcher highly recommends necessary inspection and strong performance monitoring on time by consultants and public officers in contract management of public sector construction bidding system safe unnecessarily high costs by government organization in operations and completed lately underperformance of construction at Derashe Woreda. It was also recommended that risks needed timely response to achieve project objectives and easily be solved problems of variations and changes in design and to prevent over cost incur of budget by technical experts intentional in design evaluation problem.*

**Keywords:** contract management, contract administration, public sector construction procurement management, bidding system.

**DETERMINANTS OF EFFECTIVENESS OF BUDGET AND BUDGETARY CONTROL  
SYSTEM IN SELECTED PUBLIC SECTORS AND GOVERNMENT OWN  
ORGANIZATION**

**BY: HABTAMU LEMMA**

**MAJOR ADVISOR: MESELE SHIFERAW (ASST.PROF)**

**CO-ADVISOR: BEREKET SORSA. (ASST.PROF)**

**ABSTRACT**

*Budgeting is a crucial exercise without which a firm or business cannot achieve much. Almost every enterprise, regardless of size, complexity or sector, relies heavily on budgets and budgetary systems to achieve strategic goals since it involves the establishment of predetermined goals, the reporting of actual performance results and evaluation of performance in terms of the predetermined goals. For this study, an attempt was made to investigate the determinants of effectiveness of budget and budgetary control system in selected public sector and government own organization at wolaita zone. For this study, targeted population total main zonal bureaus were nineteen Finance and Economic Development Offices and the two public institution bureaus namely ETC and EEPKO were used. The data collection instruments used in this study was questionnaire. This study focused on five purposely selected public organizations that were expected to represent all other bureaus. For this study, six explanatory variables were identified. The Statistical Package for Social Science (SPSS) used to analyze the data obtained from primary sources. The model to be applied for this research was Binary logistic regression one of multivariable statistical Analysis which was in use to calculate the probability of two possible outcomes. According to the logistic regression output, participative budgeting, competent internal audit staff, budget monitoring and evaluation were contributed for the effectiveness of budget and budgetary control in the public sector significantly and positively and budget planning process and communication was contributed for the effectiveness of budget and budgetary control in the public sector significantly and negatively. The remaining one variables; the cost reduction for the effectiveness of budget and budgetary control was negatively related and insignificant at 5% level. All of these six independent variables were making 82.4 percent the good relationship between the predictors and the variation of the effectiveness of budget and budgetary control in the public organization. Then, the researcher recommends that public organizations should understand the contributions of these five variables collectively significant and this variable, the public sector offices should support more for the Budget control functions by facilitating the internal audit works, regular review, evaluation, training new technology and workable manuals in line with office policies and guidelines and also need to develop a clear policy on budget control processes.*

**Keywords:** Budget, budgetary control, participative budget and Budget Monitoring and evaluation.

**EMPLOYEE’S ATTITUDE TOWARDS WOMEN’S IN MANAGERIAL  
POSITION IN SELECTED PUBLIC ORGANIZATIONS IN WOLAITA  
ZONE, SNNPRS, ETHIOPIA**

**BY: MABRATU BARATA BARANE**

**ADVISOR: LIDETU ALEMU (ASS. PROF.)**

**ABSTRACT**

*Sustainable and all around developments of a society cannot be brought about without the full and unreserved participation of both woman and man in the development process, and such a balanced development should also call for the elimination of all forms of discrimination, and the protection against all forms of violence against women. Cross sectional research design and both qualitative and quantitative approach were employed for the research. This research conducted in order to assess the employee’s attitude towards women’s in managerial position in selected the public sector organizations in Wolaita Zone. The total population of this research was 509 employees and with sample size of 145 in all the 11 selected public sector organizations. Both primary and secondary data were used for the findings of the study. Primary data were collected using questionnaire with seven point Likert scale. The attitude of workers was measured using the widely used attitude measurement scale, Woman as Managers Scale (WAMS). Simple Rrandom sampling technique used for selecting the samples from the population. The collected data were analyzed by descriptive statistics such as Mean, SD and % and inferential statistics; t-test and chi-square and in addition statistical tool which is SPSS 21 employed.. For checking reliability and validity of the instrument pilot study was employed. The study provided consideration to ethical issues such as confidentiality and anonymity. The study found out that female employees hold more favorable attitude than male employees and except religion all variables; age ,gender and marital status and educational level, religion and experience with women managers significantly affect attitude towards women’s in managerial position. The study investigated that, young aged categories of employees tend to have a more favorable attitude than old aged group of employees. The majority of the respondents tend to have a less favorable attitude towards female mangers. Married employees tend to hold better favorable attitude than those of unmarried ones. Lastly suggestions and recommendations were provided that responsible parties, government organization, nongovernmental organizations and private sectors as well religious institutions are responsible to eradicate such an old belief that women’s are in capable for leadership.*

**Keywords:** Gender stereotyping, Employees, Attitude, Women managers, Public sectors.

# THE IMPACT OF ORGANIZATIONAL CULTURE ON EMPLOYEE'S PERFORMANCE IN WOLITA SODO TEACHING REFERRAL HOSPITAL

BY: FASIL HAMBISA JALETA

ADVISOR: TEMESEGEN TERA (ASST. PROFESSOR)

## ABSTRACT

*This research paper discussed impact of organizational culture on performance of employee based on the assessment that was made on the perceptual level of employees towards the organizational culture practice in Wolita Sodo teaching referral hospital. It viewed organizational culture as the pattern of values, norms, beliefs, attitudes and assumptions that may not have been articulated but shape the ways in which people behave and get things done. The conceptual framework was designed, taking organizational culture as independent variables and employee performance as dependent variable. This study was made based on descriptive and inferential statistics. Thus, employee's perception level towards the organizational culture of the hospital was assessed and measured by 36 items adapted from the Denison organizational culture survey instrument and employee performance was measured based on the individual work performance questionnaire (IWPQ) that was adopted from Koopmans 2014. The study took 229 target populations with response rate of 200 respondents. Based on the data collected and the analysis that was made, precipitation level of the employees towards organizational culture of their hospital was found moderate and the study revealed that mission culture was the most dominant culture type prevailing in the hospital. Moderate level of employee performance was found based on the assessment that was done on the performance level of employees. Based on the analysis, there was a positive and significant relationship between all four traits of organizational culture (adaptability, mission, consistency and involvement) and employee performance. Moreover, adaptability was found the most contributing organizational culture traits in the prediction of employee performance followed by mission, involvement and consistency. As per the survey result the four predictor variables of organizational culture significantly explain 52.8% of the variance in performance level of employees. The implication of the result was that there was strong link between organizational culture and employee performance by determining the level of performance employees put in their work. It was recommended that Wolita Sodo teaching referral hospital should invest more in positive organizational culture practices that contribute significantly towards performance of employees. Future researches were also recommended incorporating other dimensions of organizational culture and factors that can impact performance of employees that are either have not been examined or fully explored.*

**Key Words: organizational culture, Employee performance.**

**DETERMINANTS OF THE DEMAND FOR HEALTH INSURANCE SERVICES  
(THE STUDY ON ETHIOPIAN INSURANCE COMPANIES OF WOLAITA SODO  
TOWN)**

**BY: FANTAHUN TEKLEBRIHAN FOLLA**

**ADVISOR: MENGISTU MATINO (ASSISTANT PROF.)**

**ABSTRACT**

*Health is the most important asset and health service insurance is the most important type of insurance which provides financial protection to a person and his /her family at the time of uncertainty causing damage. health insurance provides both safety and protection to individuals. In Ethiopia, the health service insurance market is under developed, non-competitive and not given higher priority. Based on this fact, the present cross sectional study was selected with an objective to examine determinants of the demand for health service insurance in Wolaita Sodo town. The study was conducted in 2019/20 fiscal period. The data for the study were collected from primary source through open ended and close ended questionnaire from households dwelling at Wolaita Sodo town. The Sample size was 245 household heads using Cochran (1963:75) formula. Simple random sample technique was employed in the study to get the respondents of this study. Stata version 20 was used to analyze and interpret the data collected. The questionnaires were analyzed using descriptive analysis and logistic regression model. The result of the study showed that there was a positive significant relationship among Income level (89 percent those with higher monthly income households, demand health service insurance), educational level of the head (72.05 percent of those house hold heads with tertiary level of education are demanding health service insurance), family size, and awareness about health service insurance by the head. Finally the study recommended that the insurance companies should reconsider and reduce the premium base considering mutual benefit without exaggerating their intended profit so that household can afford and increase their demand for health service insurance. And health insurance companies should do more in creating awareness to the general public via using mass Medias, internet and other transmission mechanisms, among others. Having this finding, the researcher furtherly implicated the other studies goes through the variables which the researcher did not include in this study such as, residence (Urban/Rural), Health Status, Banking Sector development, and others.*

**Key words:** Health service insurance, Logit Model, Premium, Wolaita Sodo town

# **BUSINESS INCOME TAX PAYERS' PERCEPTION TOWARDS FAIRNESS OF TAX SYSTEM IN CASE OF WOLAITA SODO TOWN**

**BY: HILINA KASSA**

**ADVISORS: MESELE SHIFERAW (Assistant Professor)**

## **ABSTRACT**

*Tax fairness issues encompass a number of tax fairness dimensions and other fairness affecting factors. If all tax fairness dimension and other affecting factors negatively interpreted by tax payers, it could lead to the negative perceptions of the tax system by the tax payers. Good understandings of business profit tax payers' fairness perceptions help the tax authorities to improve the tax system in order to narrow the tax gap, encourage business profit tax payers' compliance and consequently mobilize adequate tax revenues. Although past studies on this issues literatre and data cocering widely scares, when to investigate the business income tax payers perception towards fairness, one was administration issue according to Sodo Town Revenue Office (STRO).The study used a cross-sectional survey design. It used primary data research approach like self-administered questionnaire and in-depth-interview. To conduct the survey from two urban kebeles, 192 respondents of Category "B" taxpayers' and 20 business profit tax payers for in-depth interview were selected by applying systematic random sampling technique means of questionnaires collected during the period April 01- May 30, 2019. Descriptive statistical tools correlation, multiple regression and statistical package (SPSS) software, were used to analyze the survey data and thematic analysis were applied to interpret in-depth interviews. Finally, This study highlighted the significance of improving the tax system by educating taxpayers', educating tax collectors to increase tax collection efficiency, develop simple and transparent tax collection systems, provide valuable information to taxpayers', building trust and confidence with taxpayers' to increase the positive perception towards fairness. Providing adequate tax training to the public or tax payers must be considered crucial. Therefore authority, at local or higher level must be apply more efforts on training and tax information because of taxpayers' need more information about their tax obligations and their role in promoting the growth of the economy of the country and the well-being of its citizens. Thereby, enhancing fair tax collection and providing basis for further research in a broader scope.*

**Keywords: Tax, Category "B" Taxpayers perception, Fairness, sodo town ,Ethiopia**

# THE IMPACT OF PROMOTIONAL MIX ELEMENTS ON CUSTOMER MOTIVATION: A STUDY ON DASHEN BANK IN WOLAITA SODO TOWN, SNNPR, ETHIOPIA

BY: NEBIYU ERMIAS

ADVISOR HAILEMARIAM GEBREMICHAEL (PhD)

## ABSTRACT

*The purpose of this study was to examine the impact of marketing promotion mix elements on customer motivation a study on Dashen Bank Wolaita Sodo. The target population comprised of 390 individual respondents whose samplings are convenience from 18,000 total populations by use of yemane sample size determination method. Both primary and secondary data sources were used to collect data. Primary data sources was collected through closed ended questionnaires while, secondary sources were collected through reports and yearly booklet. Statistical package for Social Science (SPSS) version 20 was used to process the collected data. This study employed descriptive and explanatory research design. Descriptive statistics that are frequency, percentage, mean and inferential statistics that are Pearson movement of correlation used to measure the impact of promotional mix elements on customer motivation while multiple regressions used to determine the level of strength for each of both dependant and independent variable. The results of this study shows that all variables (i.e. Personal selling, sales promotion, public relations, advertising, direct mail and trade fair & exhibitions all have contributing  $R^2$  of 72.8% (0.728) implies statistically significant and positive association with customer motivation (ANOVA = 0.000,  $P < 0.05$ ). Regression result also showed that all the independent variables have a combined impact on customer motivation up to 72.8 % ( $r^2=0.728$ ). Therefore, Customers' perception should be the center stage of internal motivation building and now a days there are a lot of banking industries in Ethiopia so the organization have to use any appropriate means of communication to get large number of users and the institution must modernize the way of marketing and customer sourcing for good profit making and increase the sales of their product. As the result from both regression and correlation analysis values show that trade fair & exhibitions, direct mail, public relation and advertising shows that the organization mainly reaches individual customer according to the strategic plan of the bank so it shows there is good implementation of the given independent variable in an organization hence the bank should maintain its strength positively.*

**Keywords:** customer motivation, personal selling, sales promotion, public relations, advertising, direct mail, trade fair & exhibition.

# **DETERMINANTS OF LOAN REPAYEMENT PERFORMANCE OF RURAL SAVING AND CREDIT COOPERATIVE: THE CASE OF SODO ZURIYA WEREDA IN WOLAITA ZONE.**

**BY:TESFALIDET W/YOHANNES**

**ADVISOR- DR. HAILEMARIAM G.**

## **ABSTRACT**

*The objective of this study was to identify and examine the determinants of loan repayment in RUSACCOs in Wolaita Zone Sodo Zuria Woreda, SNNPRS, Ethiopia. In fact, identifying and examining such determinant factors of loan repayment is vital in the achievement of profitability and sustainability of RUSACCO. The study employed a simple random sampling approach and a total of 195 respondents were participated of which 122 borrowers were repayment in arrears and 73 pay schedule. In this connection, the researcher collected data from primary and secondary sources and analyzed by using binary logistic model. A total of 17 explanatory variables were included in this model and out of these, six variables were found to be statistically significant to influence the probability of loan repayment. These significant variables are: training, educational level, nearness of borrowers from the office and income from activities financed by loan are affecting positively, method of lending and Family size affecting negatively. However education is one of the important variables to create awareness the individuals who pay in schedules, therefore the concerned body give emphases to education. Some borrowers very far from borrowing institution they have default loans ,there fore werdas cooperative promotion office establish another RuSSACOs near to community. Income from activities financed another variable which is by the loan increases, borrowers enhance their ability to repay their loan on time. So concerned body mobilize. Training is one of significant variables,when trained individuals are pay on schedule than not trained. So RuSSACOs committee before loan disbursement, continuous training for their members about loan management. On the basis of the study findings, The researcher suggests that the identified significant variables are very important for further interventions by the institutions, stakeholders and policy makers so as to come with a breakthrough to significantly take action to avoid defaulting problems and factors in loan repayment.Further recommendations are presented base on the finding of the results.*

**Keywords,** Loan Repayment, Repayment in arrears and Pay schedule

# **DETERMINANTS OF BANK PROFITABILITY IN ETHIOPIA: THE CASE OF SELECTED PRIVATE COMMERCIAL BANKS**

**BY: DEMELASH YIFRU**

**ADVISOR: HAILE MARIAM GEBREMICHAEL. (PHD)**

## **ABSTRACT**

*Research studies on the determinants of bank profitability in Ethiopia remained an ignored area of empirical research. Thus, this study examined the determinants of Ethiopian commercial banks profitability by using data obtained from the audited financial statements of a sample of 6 commercial banks in Ethiopia for the period of 2008 to 2018 and National bank of Ethiopia. The study used return on assets (ROA) as dependent profitability variable. In addition, the study used bank size as measured by logarithm of total Assets (ITA), operating expense efficiency as measured by square root of the ratio of non-interest expenses to total assets (NIETAsqrt), capitalization as measured by ratio of equity to total assets (ETA), credit risk as measured by ratio of loan loss provisions to total loans (LLPTL), asset composition as measured by ratio of loans to total Assets (LOTA) and activity diversification as measured by ratio of non-interest income to total assets (NIITA) as independent variables. Moreover, the study used GDP per capital growth rate (GDPCGR), rate of inflation (INF) and market concentration (CONC) as control variables. Both correlation analysis and linear panel data regression models using fixed effects estimation were used to analyze the relationships of profitability variable with independent and control variables. The major findings of the study show that; size, capitalization, loan, and activity diversification are positively and significantly related to bank's profitability, while credit risk and expense preference behavior have a negative impact. During the period under study, the results suggest that inflation has a negative impact on banks profitability, while concentration affects banks profitability positively in a statistically significant manner. The study used return on assets (ROA) as dependent profitability variable. Moreover, the study used both bank specific and external variables as explanatory variables. Both descriptive statistics and econometrics model specifically fixed effects estimation were used to analyze the relationships of dependent variable with explanatory variables. Finally, the impact of GDP per capital growth has not significantly explained the variations in the profitability of the Ethiopian commercial banks.*

**Keywords:** Determinants, External Factors, Internal Factors, Profitability, Private Banks, and Ethiopia

# **ASSESSMENT OF TEACHERS' MOTIVATION AND ITS CONTRIBUTION IN THE IMPLEMENTATION OF SCHOOL IMPROVEMENT PROGRAM IN SECONDARY SCHOOLS OF KAMBATA TEMBARO ZONE**

**BY: TEMESGEN HAFGANO**

**ADVISOR: Dr. SOLOMON.LEMMA**

## **ABSTRACT**

*The purpose of this study was to assess the extent of teachers' motivation and its contribution in the implementation of school improvement program in secondary schools of Kambata Tembaro Zone. . Hence, it examined the core activities of teachers' motivation and its contribution in SIP implementation. To accomplish this purpose, the study employed a descriptive survey method, which was supplemented by qualitative research. Among the 36 government secondary schools found in the Zone, 9(30%) were taken as a sample by using simple random sampling technique. Then, 107 teachers were selected through random sampling techniques particularly lottery method, 55 school leaders and 9 SIP committee members were selected by purposive sampling and 6 Woreda education experts and 6 supervisors were involved in the study by using comprehensive sampling techniques. Questionnaire was the main instrument of data collection. Interview, document analysis, and observation were also utilized to substantiate the data gained through the questionnaire. Percentage, mean, standard deviation and t-test were employed to analyze the quantitative data, while qualitative data which was obtained through open ended questions, interview, document analysis, and observation were analyzed using narration. The results of the study revealed that teachers academic needs is insufficient On account of this it was perceived that teachers in secondary school were coming out academic activities below standard interims of knowledge ,values and believes. This was due to the less concern given to update their profession and low attention given for the learners performance etc to make them responsible for their learning in general. Teachers were not motivated to apply active learning method and didn't pay attention to establish environment in their students classroom and also they didn't due attention to genuinely assess their students performance . Further more, they had low respect ion for the students and low students for teaching profession which negatively contributed to over all activities in the secondary schools where they were in. The researcher tried to perceive that lack at autonomy due to political interference affected their over all performance in the secondary school and also lack of inspiring recognition from the concerned bodies to awe red their teaching performance. Therefor, suggestions were forwarded: the schoos should improve the working environment and working conditions in secondary schools, payment for teachers' allowances, salaries and other benefits should be improved by setting clear payment policies and use them in order to guide the whole process payment and the government should increase the salaries and the educational office and school leaders should work students disciplinary problems.*

**THE EFFECT OF REWARD MANAGEMENT PRACTICES ON  
EMPLOYEES' MOTIVATION: IN CASE OF COMMERCIAL BANK OF  
ETHIOPIA, WOLAITA SODO CITY BRANCHES**

**BY: WONDIMAGEGN ABULE**

**MAJOR ADVISOR: HAILEMARIAM G/MICHAEL (PH.D)**

**ABSTRACT**

*The purpose of this research was to investigate, the effect of reward management practices on employee motivation in commercial bank of Ethiopia, Wolaita sodo city branches. The study used both primary and secondary sources of data. A quantitative research approach of data collection was used and 154 questionnaires were distributed out of which 150 of them were returned. Probability sampling (stratified) method was used and employees were selected from each stratum with a random sampling technique. Among the major findings, the overall perception of respondents over current reward practices were not happy, not enough, not competitive and not attractive. The result of correlation shows that; there exists positive and significant relation between benefit, work content and payment, and employee motivation. On other side, the result of regression analysis shows that; benefit, and working condition is high explanatory of employee motivation. On top of that, a significant portion of employees considered the reward practices in commercial bank of Ethiopia. As less motivating, unfair, not competitive and attractive and hence employees seemed to be less responsibility, less loyalty and belongingness and less committed to the organization. It is recommended to review the banks current reward management practice that are factor that affect employee motivation.*

# DETERMINANTS OF INVESTMENT ACTIVITIES IN WOLAITA ZONE

BY: ABEL ACHA

ADVISOR: HAILEMARIAM G. (PH.D)

## ABSTRACT

*The study was conducted to assess the determinants of investment activities in Wolaita zone . Zone has vast natural resources and good climatic condition which indicates the relatively advantage for the potential investor to investment. But still the investment activity is in its infancy stage. Investment activity plays a crucial role in the economic growth of a country. Economic literatures show that investment is, both empirically and theoretically, the key determinant to economic growth. For this study, both primary and secondary data were used. The zone has 373 investors who are investing permanently in the zone and out of these investors the researcher selected 193 who represent the other else and to fill the questionnaires for data collection purpose by using Sliven"s Formula. In this research, the descriptive and explanatory designs were employed. Main findings of the study were difficulties of access of bank credit, public infrastructure, government incentives, lack of habit of private saving and lack of good governance when they started their business, and low encouragement from the investment offices are the major findings of this study. The regression results show that , access to bank credit, Lending interest rate, Good governance , Private saving and institutional factors were have significant positive effect the investment activity, while lending interest rate and political instability have significant negative effect on performance of investment activity under the study . Finally, investment related problem is not the responsibility of the government alone, but also all investors, the local community, the private business man of the zone has to work together with the government so as to attain the desired objectives.*

**Keywords:** Determinants of Investment; Activity;.

# **A MARKET CHAIN ANALYSIS OF BANANA: THE CASE OF KACHABIRA WOREDA, KANBATA TANBARO ZONE, SNNPRS**

**BY: MULATU GODEBO**

**ADVISOR: - HAILEMARIAM G. (PH.D)**

## **ABSTRACT**

*Banana is the most consumed and produced fruit in the world. Still the demand for the banana in all season is high but there is a problem in production and marketing along the market channel in Ethiopia. Farmers used banana as cash crop and for improving food security. Therefore, this study was aimed at analyzing banana marketing chain in Kachabira Woreda with specific objective of identifying actors and their role, important marketing channels, to compute marketing costs and price margins at different levels and to identify constraints and opportunities in market chain of the banana in Kachabira Woreda. Primary and secondary data were used for this study. Primary data came from 278 banana producing household and 69 traders in three sampled kebeles in the district. Semi-structured question, focus group discussion and interview used to obtain primary information from sample of the respondents. Secondary data were collected from Kachabira Agriculture and Natural Resource Office, magazine, journals, Published and Unpublished reports and annual reports from CSA. Focus group discussion and interview were also used to obtain qualitative information for the respondents. Descriptive statistics was used to age, household size, distance to nearest market, education, experiences in banana cultivation, amount of tree harvest in production season and others by using mean, frequency and percentage for the sample of producers and traders. Cost and profit analyses were used to evaluate the performance of market agents in the channel. High amount of banana were produced in Wallana kebele and low in East Lesho kebele in the area. The finding showed that there is a problem in banana production and marketing like Lack of technical training, Poor disease control, Storage problems, low information flow, Price fluctuations, too much competition and others in study area. This study concludes by suggesting that strengthen technical training will improve the production capacity of the farmers, building, maintain and improving road facility and Strengthening and continuous awareness creation for the farmer to organize and join cooperatives will enable all market actors to move their product freely.*

Kachabira Wored, Market chain actor, Marketing margins, Marketing channel, Constraints and opportunities

# **THE ROLE OF ORGANIZATIONAL WORKING CULTURE ON CUSTOMER SATISFACTION: THE CASE OF TAMBARO WOREDA GOVERNMENT OFFICES**

**BY: AWOKE ABIYO**

**MAJOR ADVISOR: MENGISTU MATINO (ASSISTANCE PROFESSOR)**

## **ABSTRACT**

*The objective of this study was to investigate the role organizational working culture on customer satisfaction of six organizational culture variables namely, team orientation, stability, innovation, aggressiveness attention to detail, and people orientation, on customer satisfaction in case of Tambro woreda public services offices. The study was made based on descriptive and inferential research design. The study had used both qualitative and quantitative approaches. A structured questionnaire was used to measure the level of organization working culture and customer satisfaction. A total of 220 employees were participated in the study. Data were collected using questionnaires then after it was analyzed by using the version 20 of statistical package for the social sciences (SPSS) software. It was analyzed by employing descriptive and inferential statistics. While the research was expected to leverage on such descriptive statistical tools as frequency, mean, percentile and standard deviation, it also applied inferential statistics through ANOVAs, correlations and linear regression model analysis. The results show that of the six variables measuring organizational working culture the four were positively related but the two related negatively with customer satisfaction. Team ordination culture is the most contributing organizational culture variable in the prediction of customer satisfaction. The other five organizational working culture variables, in their descending order of standardized coefficients are stability, innovation, aggressiveness, attention to details and people orientation. It was, statistically significant of the six organizational culture variables were team orientation, stability, innovation, aggressiveness, attention to details and people orientation. Stability, innovation, aggressiveness and team orientation indicate that they have positive effect on customer satisfaction. However, the rest two variables which are attention to details and people orientation have negative effect on customer satisfaction. The implications of the findings were government offices should give attention to team orientation to its employees, keep them motivated and satisfied in their work and make them stable in their working environment.*

**Key words:** Team, Orientation, People, Aggressiveness, Stability, Innovation, Attention, Detail Customers and Satisfaction.

# FACTORS AFFECTING HOUSEHOLDS PARTICIPATION IN COOPERATIVE BUSINESS IN CASE OF DAMOT GALE WOREDA WOLAITA ZONE ETHIOPIA

BY:TAREKEGN LERA

ADVISOR MENGISTU MATINO (ASSIT. PROFESSOR)

## ABSTRACT

*The objective of study was to investigate the factors affecting Households participation in cooperatives business in Damot Gale Woreda Wolaita Zone Ethiopia. Both primary and secondary data were taken for this study. A simple random sampling method was employed to select 3/three/ selected kebeles household cooperatives and a total of 140 sample respondents from Damot Gale Woreda of Wolaita Zone. The Primary data were collected by using questionnaires to get information from households then it was analyzed through both descriptive and inferential statistics(correlation and regression analysis) using SPSS software version20 which helped to examine the general level of household's participation and the selected determinant factors of participation. The major findings From the arithmetic mean values generated by the descriptive statistics, shows that economic factors (mean=2.11),institutional factors (mean=2.05), and psychological factors (mean=2.15) are below the average cut-off point of 3.From this we can understand that households of Damot Gale Woreda are moderately agreed or satisfied with the factors that affect households' participation .Additionally, the regression result which shows the relative contribution of Economic Factors i.e. (Beta=.132) makes the moderate contribution to explaining the dependent variable low participation of households. The results revealed that, a one unit increase or positive change in "Economic Factors " would lead to a 0.132 unit increase the level of low households' participation. The researcher therefore, recommend that Damot Gale Woreda marketing and cooperative work office should consider treating all in equal way, help to communicates freely on the goals of the cooperatives, inspires households to achieve.*

**Key words: Households, Participation, Cooperatives, Business**

**THE EFFECT OF WORK ENVIRONMENT ON EMPLOYEE'S  
PERFORMANCE IN COMMERCIAL BANK OF ETHIOPIA (IN THE  
CASE OF SODO TOWN)**

**BY: BEKUR GIRMA HAILE**

**ADVISOR: LIDETU A (ASST.PROF)**

**ABSTRACT**

*The main purpose of the study was to investigate the effect of working environment on employees' performance at commercial bank of Ethiopia, Sodo branch. This study used only quantitative research design. Data were analyzed through descriptive and inferential statistics. Data were collected using five Point Likert-Scale questionnaires where 153 responses were properly filled and returned. SPSS version 20 software program was used to analyze empirical data collected through the close ended questionnaire. The independent variables are Office building, Job aid, Supervisor Support, Job characteristics, Relationship with co-worker and Salary whereas the dependent variable is employees' performance. As multiple linear regressions indicate, among working environment dimensions such as office building, salary, supervisor support and job aid has a significant effect on employees' performance whereas, job characteristics and relationship with co-worker has insignificant effect on employees' performance. The study recommended that the management should provide a better working environment to its employees, which is adequate facilities and resources to do their job effectively. To successful creation of work environment includes strategies of the Bank and Bank management should engage in increasing the qualities and quantities of the supervision program. Also there should be a constant communication between top management and all employees of the Bank to understand employees' perception and to create committed and valuable employees and to achieve the strategic goal of the Bank.*

**Key Words: - Work environment, Employee Performance and Sodo town.**

# **Factors Influencing the Growth of Agricultural Marketing Cooperative: (A Case Study of Damot Gale Woreda, Wolaita Zone, SNNPR, ETHIOPIA)**

**BY: YOHANES ABOTA ASHA**

**ADVISOR: MENGISTU.M (ASST. PROFESSOR)**

## **ABSTRACT**

*This study aimed at assessing the factors influencing the growth of agricultural marketing cooperatives in Damot Gale Woreda. The targets for this research were members of agricultural marketing cooperatives. For the sake of achieving the objectives of this study, responses were elicited from One Hundred Nine (109) respondents who were drawn from the target population using random sampling procedure. Face-to-face interviews were conducted with 10 officers' and cooperative leaders of agricultural marketing cooperatives. Secondary data by using cross sectional from five (5) cooperatives were analyzed using descriptive and inferential analyses. Besides, the qualitative data collected were analyzed using descriptive narrations through concurrent triangulation strategy. To facilitate the data processing and analysis activity SPSS version 21 was used. The empirical study identified seven major factors for the growth of agricultural marketing cooperatives which include: member participation, member commitment, structural, communication, managerial, market and government support. The findings indicate that, there exists positive significant ranging from low to strong relationship was found between independent variables and dependent variable. For example, there is a strong positive relationship was found between government support and growth ( $r = .884$ ,  $p < .01$ ) and commitment and growth ( $r = .831$ ,  $p < 0.01$ ), which are statistically significant at 99% confidence level. Whereas, market factor ( $r = .396$ ,  $p < 0.01$ ), found low positive correlation with growth of cooperatives which are statistically significant at 99% confidence level. Finally, the study has suggested present and future cooperative promoter, government, prospective members and other stakeholders to take those identified influential growth factors into consideration while they organize cooperative, making policies and strategies for cooperatives. This is expected to give cooperatives a competitive, growth and sustainable advantage of understanding and doing business in the competitive business environment.*

**Keywords:** agriculture, cooperative, commitment, communication, growth, market and participation

# **THE EFFECT OF MARKETING MIX ELEMENTS ON SALES PERFORMANCE OF FLOUR FACTORIES, IN THE CASE OF WORABE SILTE ZONE, SNNPRS**

**BY: NURADIN UMER**

**ADVISOR: LIDETU ALEMU (Asst. prof.)**

## **ABSTRACT**

*The purpose of the study was to empirically investigate the effects of marketing mix elements on sales performance of flour factories in the case of Worabe silte zone SNNPRS, from four marketing mix elements namely: product, price, promotion and physical distribution. To conduct this study, quantitative and qualitative research method were employed. There were 15 flour factories among those six factories were selected by purposive sampling techniques. The study was done on primary and secondary data source. Considering the small size of the population, selections of the respondents was carried out by using census and 114 permanent employees was used to collect the data. However, only 108 employees responded to the questionnaires and hence, the response rate was 94.7 percent. Besides, descriptive statistical tools like percentage, mean and standard deviation were used to illustrate the demographic characteristics of the respondents and to assess the perception of employees from data collected through questionnaire and the study revealed that majority of the respondents feel agreed on marketing mix elements. Thus, inferential statistical methods like correlation analysis was used to assess the relationship between marketing mix elements and sales performance, multiple linear regression analysis was also employed to examine the influence of marketing mix elements on sales performance by using primary data collected through five scale likert questionnaire. Based on the findings of the study, all determinate factors of sales performance have a positive correlation with sales performance. The multiple linear regression analysis result revealed that three variables product, price and distribution have a significant effect on sales performance. This indicated that marketing mix elements determine the sales performance of flour factories in the case of Worabe. Therefore, flour factories in Worabe should implement marketing mix elements appropriately and continuously, to achieve and maintain sustainable sales performance.*

**Keywords:** Marketing mix elements, flour factories and Sales Performance.

**DETERMINANTS OF INFORMAL SECTORS BUSINESS  
PERFORMANCE: THE CASE OF STREET VENDORS IN SODO TOWN**

**BY :WUBANCHI MANJURA**

**ADVISOR: MENGISTU MATINO (ASST. PROF)**

**ABSTRACT**

*Informal sector is a type of business activity in which the participants operating their activity outside the official legal and fiscal system and mainly characterized by absence of reliable statistical information. Street vending is one of the most commonly practiced business activities which represent a significant share of the urban informal economy, with the primary objective of generating income and means of job opportunity to the persons concerned. It is the characteristics of developing country. Due to Population density and high levels of unemployment in Sodo town, many young peoples have been seen involved in street vending business as a means of income and survival. The general objective of this study was to identify the determinants influencing performance of street vending businesses in the study area. Related theoretical and empirical literatures were reviewed in detail as a guideline to check the effect of independent variables on the performance of the business. This study employed explanatory research design with quantitative approaches. Non probability sampling technique namely availability (convenience sample) was employed and a sample of 196 street vendors were identified to collect the data. The study used both primary and secondary data. The questionnaire was pilot tested at Boditi town by 10% of the sample population to check reliability and validity. Data was analyzed by using both descriptive and inferential statistics tools. Based on the results of correlation, six determining factors of street vending business have a high positive and significant correlation with performance; one indicators namely, level of education have low positive correlation and the remaining one variable (lack of cooperation among stockholders) have negative and little correlation with dependent variable. The results of multiple linear regression analysis revealed that all explanatory variables except level of education have a significant effect on performance. The findings of the study showed that based on the recent standard established by the World Bank, street vendors have low performance in terms of daily income from the business activity; due to challenges facing the business. Based on the findings the study recommended that, government should give due attention and set appropriate policies and regulations guiding the street vending businesses as small business enterprises with the aim of transforming them into formal business activity. Finally the study pointed out implications that further researchers should consider conducting elaborated research in the area by adding other indicators and increasing the study population.*

**Key words:** Informal sector, street vendor, determinants and vendors performa

**THE EFFECTS OF ORGANIZATIONAL CULTURE ON EMPLOYEE  
PERFORMANCE: THE CASE STUDY OF CHENCHA ZURIA WOREDA  
AGRICULTURAL ORGANIZATION**

**By-AKLILU MANAYE**

**ADVISOR: HAILEMARIYAM G. (PhD)**

**ABSTRACT**

*This study investigated the effects of organizational culture on employee's performance. The conceptual framework was designed by treating organizational culture as an independent variable of team working; performance based compensation; bureaucratic hierarchy; organizational behavior; employee commitment and an innovation culture and employee performance as dependent variable; and based organization culture a structured and five point Likert scale type questionnaire was developed and self-administered to employees in CZW agriculture organization. Sampling techniques using the census method with the number of respondents targeted are 101 of the whole population in the organization 93 employees was participated in the study which is 92.08% and the data's were analyzed using descriptive, correlation and regression analysis. The results show that the six traits measuring organizational culture except bureaucratic hierarchy other all are statistically significant effect on employee's performance but bureaucratic hierarchy was statistically insignificant effect. According to the results of multiple regression analysis given the R Square of 0.789, the model summary reveals that the proportion of the variation in employee performance is explained by culture of the organization is 78.9% (where by R square is .789) and the remaining 21.1% of the variance is explained by other unexplored variables not included in this study. Based on the research findings and research conclusions, major recommendations were offered for CZW agricultural organization of top and middle managers, employee's capacity development and creating safe employee working environment for the purpose of organizational success.*

**Key words:** Team working, Performance based compensation; Bureaucratic hierarchy; Organizational behavior; employee commitment; and an innovation culture

**THE ROLE OF FINANCIAL INSTITUTIONS ON THE GROWTH OF SMALL  
AND MEDIUM SCALE ENTERPRISES  
(THE STUDY ON WOLAITA SODO TOWN)**

**BY: ABINET DEMISSIE DAISO**

**ADVISOR: MENGISTU MATINO (MBA, ASSISTANT PROF.)**

**ABSTRACT**

*This study was aimed at examining the role of financial institutions in the growth of small and medium enterprises (SMEs) operating at Wolaita Sodo town. To undertake the study 290 SMEs managers were randomly selected by using Yamane sample size determination mechanisms from the total population of 1051 SMEs found in the study area and the sample size was distributed for each 5 strata proportionately. Structured questionnaire was developed to collect the data and the data were analyzed by using both descriptive and inferential methods via Stata 14 package. The findings from inferential statistics indicated that loan amount of the enterprise, having saving account from any financial institution, loan repayment duration; provision of training service by any financial institutions had a positive and statistically significant effect on the growth of SMEs. Lack of access to financial institutions, lack of loan relationship had a negative and statistically significant effect on the growth of SMEs. The study recommended that the government and financial intuitions to make credit available and affordable to SMEs reducing the traditional barriers to SMEs financing. The study also recommended SME's to open saving account and make relationship with any financial institutions to enhance their growth rates. Moreover, the issue of the role of financial institution in MSEs needs further investigations given this study as a stepping stone.*

**Keywords:** Role offinancial institutions, Small and Medium Enterprise, Growth, Banks.

# CHALLENGES OF PUBLIC PROCUREMENT PRACTICES IN CASE OF HADIYA ZONE FINANCE DEPARTMENT

**BY: SIRGOTA AWOL KELBORE**

**ADVISOR: Mr. LIDETU ALEMU (ASSO. PROFESSOR)**

## ABSTRACT

*The General objective of the study was to investigate the challenges of public procurement practices in Hadiya zone finance and other nine user public departments. The relationship between the various variables of study was illustrated by using the aid of a conceptual framework. Accordingly, to achieve the objective of the study, the researcher evaluated how ethics, staff competencies, compliance to regulations and procurement planning influence public procurement practices in public departments. Qualitative and quantity research methodologies were employed to collect data from primary and secondary sources in the study area. Moreover, purposive and stratified sampling techniques were used to select a representative sample from a target population of 546 employees with a sample size of 230 respondents and the respond rate is 98.26%. A mixture of Interview and Likert- Scale questionnaire were employed to collect from sampled respondents. The collected data were further analyzed using SPSS. Descriptive & inferential statistics were used to analyze data and comprise the use of frequencies, percentage (relative frequency) and mean. The finding of research had revealed that there was unethical practice, poor staff competency, incompliance to rules and regulation, and improper procurement plan in Hadiya zone finance department. The followings are major Recommendations: Hadiya zone finance department should have to work hard in ethical area of staffs, follow up and critical supervision in practicing rules at the time, before and after procurement, training professionals; the planning process for procuring should involve all concerned departments so that planning can be done in advance in accordance settled procedure.*

**Keywords:** Procurement practices, challenges, Ethics, staff competencies, incompliances to regulation, procurement planning and Hadiya zone finance

# **DETERMINANTS OF TOURISM DEVELOPMENT IN KEMBATA TEMBARO ZONE, ETHIOPIA**

**BY: MELKAMU MATHEWOS**

**ADVISOR: HAILEMARIAM G. (PhD)  
ABSTRACT**

*Currently, activities of tourism are very alarming, but they were challenged by different obstacles. This study investigated the Determinants of Tourism Development in Kembata Tembaro Zone. The study was made using both quantitative and qualitative method. Data were used to elaborate quantitative data. The predicting factors (local government commitment, skilled man power, host community involvement, quality service, basic tourism infrastructure, institutional arrangement, promotion activities, stakeholders' involvement, awareness creation and budget allocation) investigated towards tourism development in Kembata Tembaro zone using cross-sectional survey data. Census sampling was used to identify respondents and 183 employees' survey results were analyzed five point likert type questionnaire as a primary data and interview responses were used to elaborate the quantitative data rest 11 were not returned. Both primary and secondary data were used in the study and research used explanatory design. After taking pilot study, Cronbach's Alpha for reliability test (each  $\geq .7$  variable were checked as reliable and the data was analyzed via descriptive (frequency, mean, standard deviation) and inferential statistical methods (correlation and regression) analysis were used. And qualitative data's were used to elaborate quantitative data and correlation analysis was used to examine the association between the independent and dependent variable and regression analysis was used to show the level of the effect of the independent variables on dependent variables. Thus, except quality of service and budget allocation the rest have positive significant effect on tourism development. Accordingly, Skilled man power, basic infrastructure and promotion activities were highly related to tourism activities and skilled man power, host community involvement and basic infrastructure have significantly high effect on tourism development and the rest except quality service and budget allocation, have significant effect on tourism development. Therefore, concerned bodies should have to focus on factors hindering the tourism development of the area by prioritizing their association order and their effect and further studies should be made by taking different sample groups and time serious data.*

**KEY WORDS:** Tourism Development, Skilled man power, Promotion of tourism activities & basic tourism infrastructure.

**WORK MOTIVATION AND JOB PERFORMANCE OF AGRICULTURAL  
DEVELOPMENT AGENTS: THE CASE OF SELECTED DISTRICT OF  
WOLAITA ZONE, SUOTHERN NATION NATIONALITY PEOPLE  
REGIONAL STATE, ETHIOPIA**

**BY: HIRBO SHANKO JILLO**

**ADVISOR: HAILEMARIAM G/MICHAEL (PH.D.)**

**ABSTRACT**

*This study was designed to identify the level and the factors which influence work motivation and job performance of DAs. For this study, two woredas with total sample size of 120 DAs out of 170 development agents were included as the sample respondent. The respondents were selected by using simple random sampling techniques following probability proportional sampling procedures. For the study, a structured survey questionnaire was used to collect quantitative data. For data analysis, descriptive statistics like percentage, mean, stadardard deviation, F-test and Chi-square test were used. According to chi-square and F- test result among seventeen variables fourteen variables were had significant asociasion with work motivation and job performance of DAs in the study area. But age, gender and family background had not relationship with work motivation and job performancellevel of DAs. The ordinal logistic regression model was employed to determine the most significant variables affecting DAs work motivation and job performance. The study found that 48.3% belonged to medium level of work motivation, followed by 30% and 21.7% belonging to low and high level of work motivation, respectively. The mean value of job performance level was found to be 55.8% was medium, 30 % was low and 16.7% was high. The findings therefore indicated the importance of investigating the influential factors contributing to the poor current work motivation and job performance status of DAs in the study area. Out of seventeen (17) variables considered in the model, four (4) predictor variables for each dependent were found to be significant in explaining work motivation and job performance level of DAs such as work experience, recognition, job security and job performance. Therefore, concerned Agricultural office managers and supervisors should conduct periodic assessments to determine the level of work motivation and job performance of Development Agents' and have to plan for improvement.*

**EFFECT OF JOB STRESS ON EMPLOYEE PERFORMANCE (IN CASE  
OF COMMERCIAL BANK OF ETHIOPIA, WOLAITA SODDO DISTRICT,  
SODO TOWN)**

**BY: MUNA ALI**

**ADVISOR: LIDETU ALEMU (ASST. PROF.)**

**ABSTRACT**

*In the present scenario, stress becomes a crucial word in most organization. Because the ever changing of the working world increases the level of stress to the workers especially to those who are consistently working under pressure like bank workers. In Ethiopia banking industry is the most growing and competitive sector in the economy. This situation makes the workers to work under many pressures so as to win the competition. This could cause stress among employees of the bank. This study was conducted to identify and evaluate the effect of job stress on employee performance of commercial bank of Ethiopia under Wolaita sodo district, Sodo Town. The study was conducted through Causal or explanatory research Design. To achieve the objectives of this study, data were gathered through self-administered questionnaire with 5-point Likert's scale from a population of 156 employees of CBE working in five branches. Descriptive statistics including percentage, means & standard deviations, were used to analyze the collected data. Inferential statistics, Pearson Correlations were used to find out the relationship between the variables. The study used multiple regression to analyze the effect of job stress on job performance of employee by using six variables such as work overload, , role conflict, role ambiguity, job autonomy, relationship at work and physical environment. From the result it was obtained that Work overload, and role conflict have negative and significant correlation with job performance whereas job autonomy and role ambiguity have insignificant correlation with job performance and Relationship at work and Physical environment have positive and significant correlation with job performance. Based on the findings, job stress is caused by work overload due to excessive jobs given to employees that has to be performed with in short period of time and without sufficient breaks to make refreshment, and the other cause is role conflict of employees due to lack of ability, and facilities to perform jobs and incompatible orders of higher officials regarding the same job. It was also found out that absence of supportive relationship between colleagues and failure to give continuous recognition and feedback to employees affected employees' performance. It was recommended that the organization may conduct an analysis on balancing work overload, since the employees are the performers of all of its goal and objectives they should not be considered as a machine. Role Conflict should not be an issue in this modern time so it has to solve it by strict rule and policies. In addition to this good employee relationship is ground for one fruitful organization so it has to create away for formation of team in formal relation and encourage the formation of informal relationship at work.*

**Keywords:** Employee job performance, work overload, role conflict, role ambiguity, job autonomy, relationship at work and physical environment.

# **DETERMINANTS OF CONSUMER COOPERATIVE ROLE IN REDUCING POVERTY (THE CASE OF WOLAITA SODO TOWN)**

**BY: TADELECH DOLLA YAYA**

**ADVISOR: TEMESGEN TERA (ASSISTANCE PROF.)**

## **ABSTRACT**

*This research was aimed to investigate determinants of consumer cooperatives role in poverty reduction, in the case of Wolaita Sodo town. Ethiopia. A quantitative research approach and a sample survey method were employed in order to accomplish the research objective. The target population of this study were; mainly consumer cooperative members, and managers of the consumer cooperative group. The study used both primary and secondary data from the selected consumer cooperatives. To undertake the study 280 cooperative members were randomly selected by using probability proportionate to size determination mechanisms from the total population of 798 consumer cooperative members found in the study area and the sample size was distributed for each sub-cities proportionately. Structured questionnaire was developed to collect the data and the data was analyzed by using both descriptive and inferential methods via Stata 14 package. The findings from inferential statistics indicates the poverty status of cooperative members as measured by monthly income depends on highest level of education completed by the member of the cooperative, marital status of the members as being married, economic factor and institutional characteristics, age of the cooperative member and start-up capital of the cooperatives. At the end, the study recommends that all concerned bodies working to improve the income level of the cooperative members at micro level should intervene in provision of educational access, enhancing the start-up capital of the cooperatives and economic factors, among others.*

**Key words:** Consumer Cooperatives, Cooperative members, poverty reduction, Monthly Income

**ASSESSMENT OF PROBLEMS OF TAX REVENUE ADMINISTRATION PRACTICES:  
IN CASE OF WOLAYTA ZONE HUMBO WOREDA**

**By: TEMESGEN TEKLU**

**ADVISOR:MENGISTU MATINO (MBA, Ass. Professor)**

**ABSTRACT**

*This study was conducted to evaluate determinants of tax revenue practices in case of Humbo Woreda Tax Revenue office. Descriptive research design was used to conduct the research. Opinion of sample taxpayers (235) and suggestion of chief officer of the Humbo Woreda Tax Revenue Office, are the primary sources of the research. Document review on annual reports of the Humbo Woreda Tax Revenue office, was also used to see the number of staff, the performance of the worda tax revenue office (for last 6 years), tax revenue contribution to total woreda budget. The results show that although the amount of Woreda total budget is highly increasing, the increase in revenue collection is at low rate. And the contribution of the tax revenue to total budget is also low. The opinion of respondents, tax payers, was analyzed and shows, that although all the hypothesized variables got a 'disagree' level of agreement there is difference, between them. The results, show the Humbo woreda tax revenue office, is performing below the required level in its tax revue administration. The lack of enough skilled man power, lack of enough facility to administer tax issues, and lack of awareness creation by the office, are among the major constraints of the office, contributing to its low performance. Findings further reveal, lack of quality staff, failure of fair tax estimation, lack of voluntary compliance, and lack of quality service provision, are also prevalent in the office, and might be affecting its performance. The incidence of acts of corruption might be a factor which is affecting the offices performance at a lesser amount. Hence, the HWTRO management should develop strategies which can be used to fill the gaps the research has identified in order to improve its Tax Revenue Administration practices.*

**Key words:** Tax revenue, tax administration, tax compliance



### **3. College of Natural and Computational Science**

#### **3.1. Department of Biology**

# USE AND MANAGEMENT OF MEDICINAL PLANTS BY PEOPLE OF MIRAB BADAWACHO DISTRICT HADIYA ZONE, SOUTHERN ETHIOPIA

BY: SENAIT DENSA

ADVISOR: EYASU WADA (PH.D.)

## ABSTRACT

*Ethnobotany is useful to define local community plant resource needs, utilization and management. There is decline of production of medicinal plants due to lack of awareness to manage medicinal plants in Mirab Badawacho District. The purpose of this study was to document information on use, management and conservation of medicinal plants in Mirab Badawacho District Hadiya Zone Southern Ethiopia. The study was conducted from December, 2018 to December 2019. Semi-structured interviews, field observations and comparison methods were employed and information was collected from 338 (194 male and 144 female) informants. Among whom 25 (18 males and 7 females) were key informants who were selected purposefully based on recommendations from local authorities. A total of 60 plant species, representing 34 families, 54 genera and 31 species were collected from wild and 29 collected from homegardens to treat 44 (35 human and 9 animal) diseases. The specimen was pressed and identified with the assistance of experts. The family Fabaceae contributed (11.7%), followed by Solanaceae (8.4%), Euphorbiaceae (8.4%), Asteraceae (6.6%), Curcubitaceae (5%), Lamiaceae (5%), Myrtaceae (3.3%), Rutaceae (3.3%), Brassicaceae (3.3%), Rubiaceae (3.3%), Alliaceae (3.3%) and the remaining 23 (38.4%) species contributed 23 families. Forty four species were recorded for the treatment of 34 human diseases, 5 species for 6 animal diseases and 11 species for treatment of 15 human and animal diseases. From the total medicinal plants (36.7%) species were herbs, followed by (31.7%) species of shrubs, (26.6%) species of trees and (5%) species of climbers. The most frequently used plant part were leaves (52.5%) followed by seeds (15.8%), Fruits (12%), root (11.5%), bulb (3%), bark (1.5%), latex (1.5%), whole plant part (0.7%) and waxy substance (1.5%). The widely used method of preparation was crushing and mixing (70.9%) of different parts followed by squeezing (14.7%) heating (8.9%), boiling (3%), roasting (1.9%) and cooking (0.6%). Preference ranking and paired comparison showed the efficacy, popularity and people compare some species over the other for different uses and in treating diseases. Human factors such as agricultural expansion, fire wood, charcoal production, and construction are the main threats to medicinal plants in the study area. The most threatened plant medicinal plant is *Olea europaea* and least threatened one is *Ficus vasta*. As reported from elders of the study area people have customs and beliefs traditionally which plants managed and conserved because of their spiritual ritual and medicinal values. Local people participation in cultivating medicinal plants on their farms, homegardens should be encouraged to manage and conserve the medicinal plants.*

**Keywords:** Diseases, Ethnobotany, Medicinal plant, Treatment

# **POPULATION STATUS OF NON HUMAN PRIMATE AND THEIR CONFLICT WITH HUMANS IN HUMBO COMMUNITY MANAGED FOREST AREA, WOLAITA ZONE, ETHIOPIA**

**By: TEDILAHUN TESFAYE**

**ADVISOR: ABERHAM MEGAZE (PhD)**

## **ABSTRACT**

*Human non-human primate conflict is a widely known situation where people and wildlife share common resources. The aim of this research was to estimate the population size and to examine the human non-human primate conflict in Humbo Community Managed Forest area. The study area was stratified into two habitat types, viz., dense forest and fragmented forest. Total counts method of non-human primate were carried out in an area of 29 km<sup>2</sup> (2872 hectares). The estimated Anubis baboon was 424 individuals, with the population density of 14.6/km<sup>2</sup>. The total populations for dry and wet season were 347 and 500 heads, respectively. Age structure was dominated by subadults, which constituted 49.6% of the total population and the estimated Vervet monkey was 256 individuals, with the population density of 8.8/km<sup>2</sup>. A total of 333 households were selected randomly for interview. A questionnaire survey, focus group discussions and direct field observations were carried out in the selected villages. The major types of non-human primate conflict in the area include crop raiding and livestock predation. A majority of the respondents (59.01%) faced crop damage, 25.13% reported domestic animal loss, 11.74% reported both crop damage and domestic animal loss and 4.1% reported that there is no non-human primate conflict in the study area. To mitigate these problems, majority of the respondents (54.42%) reported that guarding was an effective method. Among the respondents, 71.16% of the respondents had positive attitudes towards the conservation of non-human primate. So, to alleviate the existing problem sustainably, very urgent conservation management measures are needed by the collaboration of all concerned stakeholders.*

**Keywords:** Conflict, Conservation, Non-human primate

# ASSESSMENT OF GENETIC VARIABILITY AND TEST OF ADAPTABILITY OF ETHIOPIAN BREAD WHEAT (*Triticum aestivum* L.) GENOTYPES AT SELECTED SITES OF WOLAITA AND DAWURO ZONES, ETHIOPIA

BY: MENGISTU MESKELE ALAMBO  
MAJOR ADVISOR: MESFIN KEBEDE (PHD)  
CO-ADVISOR: EYASU WADA (PHD)

## ABSTRACT

*Bread wheat (*Triticum aestivum* L.) is the most important cereal crop serving as a staple food for vast majority of the human population and cultivated under varied agro-ecological conditions throughout the world. Ethiopia is not self-sufficient in wheat production and productivity to meet an increasing food demand partly due to lack of improved adaptable seeds. Thus, this study was carried out to evaluate the genetic variability and test of adaptability on fifteen Ethiopian bread wheat genotypes at different agro-ecologies in Wolaita and Dawuro Zones, Ethiopia. The field experiment was conducted at three locations (Damot Gale, Damot Sore Districts in Wolaita zone and Kechi District in Dawuro zone) using randomized complete block design (RCBD) with three replications at each site during the 2019/2020 main cropping season. The data analyzed by using Genstat and META-R software packages. Analysis of variance based on 11 morphological agronomic traits and 2 major wheat diseases revealed that there were highly significant differences ( $P < 0.01$ ) for days to heading, days to maturity, plant height, spike length, number of seeds spike<sup>-1</sup>, biomass yield, harvest index, thousand seed weight and severity of stem and yellow rust diseases among the genotypes studied at over locations. The highest grain yields, 6.25 t/ha (Galema), 4.333 t/ha (Alidoro) and 4.33 t/ha (Alidoro) were obtained at Damot Gale, Damot Sore and Kechi sites, respectively, due to genotypes whereas genotypes such as Alidoro, Galema and Honqolo produced higher average grain yield of 4.5 4t/ha, 4.36 t/ha and 4 t/ha, respectively, across location due to interaction effects. Eight of the 11 traits exhibited high broad sense heritability ( $h^2_b$ ) values. High  $h^2_b$  associated with high genetic advance as percent of mean was observed for grain yield and above ground biomass of combined data across location. Grain yield was significantly correlated with above ground biomass, total number of tillers, effective number of tillers thousand seed weight, spike length, seeds per spike and yellow rust at genotypic level while above ground biomass, total number of tillers, effective number of tillers, thousand seed weight at phenotypic level for a combined data. The path coefficient analysis indicated that above ground biomass and harvest index were the most influential traits in which directly and positively influenced grain yield across locations at both levels. In general, the higher mean values of above ground biomass and harvest index could be considered for simultaneous selection for higher grain yield. Though majority of the bread wheat genotypes had specific adaptation with respect to grain yield, three genotypes Alidoro, Galema and Honqolo demonstrated wider adaptability for grain yield and resistance to rusts. Hence, the genotype Alidoro is tentatively recommended for wheat growers in Wolaita and Dawuro Zones. Similar experiment need to be conducted on high yield and better adaptable genotypes for tested diseases for confirmation of the results.*

**Keywords:** Adaptability, Genetic Variability, Heritability, Correlation coefficient, Path Analysis.

# **ABUNDANCE, DIVERSITY AND HABITAT ASSOCIATION OF MEDIUM AND LARGE SIZED MAMMALS IN HUNASE FOREST, HADIYA ZONE, SOUTHERN ETHIOPIA**

**BY: SOLOMON BELAYNEH**

**ADVISOR: ABERHAM MEGAZE (PH.D.)**

## **ABSTRACT**

*Study on medium and large size mammalian species diversity and distribution is important for conservation efforts in different protected area of Ethiopia. An investigation on the diversity and abundance of medium and large sized mammalian fauna in Hunase forest, Hadiya Zone, Ethiopia was conducted from October 2018 – May 2019. The study covered two seasons. The study area was stratified in to three habitat types (riverine forest, wood land and grass land) based on vegetation cover. Representative samples of the animals in each vegetation types were surveyed. A line transect survey method was implemented to record the mammalian diversity. A total of 13 species of medium and large size mammalian species were identified and recorded in the study area. Among them, Porcupine (*Hystrix cristata*), colobus monkey (*Colobus guereza*), Anubis baboon (*Papio anubis*), Abyssinian hare (*Lepus abyssinicus*), common jackal (*Canis aureus*), Whitetailed monogoo (*Ichneumon albicauda*) and African civet (*Civettictis civetta*) were medium sized mammals and spotted hyena (*Crocuta crocuta*), Serval cat (*Felis serval*), Bush pig (*Potamochoerus larvatus*), Bush buck (*Tragelaphus scriptus*), Water buck (*Kobus ellipsi*), and common duiker (*Sylvicapra grimmia*) were the large mammals of the study area. Among them, carnivore recorded the highest diversity of species and followed by the Artiodactyl. Anubis baboon (*Papio anubis*) was the most abundant species (29.43%) followed by spotted hyena (19.6%), Water buck (2.68%) and Bush buck (2.36%) were the least abundant species. The distributions of mammals among habitat type were also different. Riverine forest harbored the highest mammalian diversity index ( $H' = 2.02$ ) followed by the woodland ( $H' = 1.992$ ) during both the wet and dry seasons, respectively. Simpson similarity index of medium and large mammal species among three habitats types in the study area was 0.64. The study area harbors considerable mammalian species that are threatened by interacting anthropogenic factors. Urgent conservation program is needed to safeguard these animals and their habitat.*

**Key words:** Abundance, Distribution, Diversity, Hunase forest, large and medium size mammals

# INDIGENOUS KNOWLEDGE ON UTILIZATION AND FARMING SYSTEM OF ENSET (*Ensete ventricosum* (Welw.) Cheesman) IN MAREKA WOREDAs, DAWURO ZONE, SOUTHERN ETHIOPIA

BY: DESTA ASHENGO

ADVISOR: BELACHEW SERAW (PHD)

## ABSTRACT

*Enset (Ensete Ventricosum(Welw)Cheesman) is the major staple food crop that ensures food security in the southern and south western Ethiopia and it is mainly cultivated through traditional indigenous farming systems. But, utilization and farming system of Enset landraces and its associated indigenous knowledge was not well-documented and awareness has not been created to the enset farming communities of Mareka Woreda in particular, because Enset has been affected by disease, drought and animal pests. This study was designed to investigate the indigenous knowledge on utilization and farming system of Enset in Mareka Woreda of Dawuro Zone. Nine kebeles were selected purposively based on altitudinal range and enset production potential. A total of 81 households having large enset farm with broad enset genetic varieties were selected and data were gathered through focus group discussion, interview and direct field observation. During data survey, a total of 28 enset landraces were collected which have given vernacular names by the local communities and data were collected via interview and questionnaire from five selected Kebele Agricultural Experts(KAE), Woreda Agricultural Officers(WAOs)and householders' for the 28 enset land races. Quantitative (yield) and qualitative (kocho quality, bulla quality, fiber quality, and disease and drought resistance characteristics) data analysis was done using frequencies, percentage and correlation. The result indicated that 9(32.1%) of enset landraces have high overall yield. 5(17.9%) and 4(14.3%) were resistant to drought and disease, respectively. Whereas, 11(39.3%) and 12(42.9 %) of enset landraces have high kocho and bulla yield quality, respectively. Only 3(10.7%) of enset have had strong fiber which is required to make rope and other fiber products. The correlation analysis for qualitative characteristics revealed that yield of Enset landraces and drought resistance characteristics have significant positive relation with  $P<0.05$ . Disease resistance character of Enset has highly significant ( $P\leq 0.01$ ) with yield of Enset and drought resistance. In contrast, kocho quality, bulla quality and fiber quality have negative correlation with yield, drought and disease resistances characteristics ( $p\geq 0.05$ ). But, bulla quality of Enset has positive correlation with Kocho quality at 1% significance level ( $p\leq 0.01$ ). Fiber quality of Enset is positively correlated with bulla and kocho quality at  $p >0.05$ . Therefore, the finding of this study reveals that the local knowledge is used for utilization and farming system of the Enset diversity.*

**Key words:** Enset, indigenous knowledge, landraces, kocho, bulla, fiber, drought resistance and disease resistance.

**ABUNDANCE, DIVERSITY AND DISTRIBUTION PATTERN OF AVIAN SPECIES IN FENTIE COMMUNITY CONSERVATION AREA: MACHAKLE WOREDA, MISRAQ GOJAM ZONE, ETHIOPIA**

**BY: LAMESGINEW TADESSE**

**ADVISOR: DR. ABEBAYEHU DESSALEGN (ASS. PROFESSOR)**

**ABSTRACT**

*The main objective of this study was to investigate the species abundance, diversity and distribution pattern of birds in Fentie community conservation area and its surroundings. The study was carried out in two seasons (dry and wet seasons). The study area was stratified based on vegetation composition. Four habitat types: forest, woodland, shrubland and farmland were considered. Point count method was employed for forest and woodland, and line-transect for farmland and shrubland. ANOVA and other SPSS outputs were applied for analysis of the affection habitat and season on abundance of species. As a result, 92 avian species belonging to 38 families were identified in the study area during the dry (in January, 2019) and wet (in May, 2019) seasons' survey. During the dry and wet season, highest avian diversity was observed in the forest ( $H= 4.101$  and  $H= 4.056$ , respectively), followed by shrubland ( $H=3.874$  and  $H= 3.848$  respectively). Highest number of species was recorded in forest, woodland, shrubland and farmland during the dry and wet seasons, respectively. There was a significant difference in diversity and abundance. Avian abundance was higher in dry season than in wet season.*

Key words: Avian diversity, Deforestation, Cultivation for farm land, species dominance

# **ASSESSMENT ON LOCAL COMMUNITY KNOWLEDGE, ATTITUDE AND PRACTICE TO REDUCE THREAT TOWARDS PROTECTED AREAS: THE CASE OF GULLELE BOTANIC GARDEN, ADDIS ABABA, ETHIOPIA**

**BY: NAGASA TARAFU**

**ADVISOR: ABRAHAM SHONGA (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The aim of this study was to assess local community knowledge, attitudes and practice to reduce threat towards Gullele Botanic Garden in Wereda ten, Gullele sub-city of Addis Ababa. Purposive and simple random sampling methods were used to conduct the research. A total of 391 respondents were participated in the study. The instruments used for data collection were personal observation and questionnaires. The collected data were analyzed using frequency distribution, percentages, and mean values using statistical package software SPSS version 20.0. The finding of the study revealed that 57.6% of respondents were less knowledgeable with more favorable attitudes (56.3%) as well as low or poor (10.9%) conservational practices about Gullele Botanic Garden. As a result, the garden can face challenges of local community cooperation which in turn induces different threats due to low or/and poor community knowledge, attitude and practices. Thus it should be promoted through organizing workshops, seminars and conferences by conservation professionals and Gullele Botanic Garden managers.*

**Key words:** Knowledge, Attitude, and Practice.

# **IN VITRO PROPAGATION OF THREE ETHIOPIAN SESAME (SESAMUM INDICUM L.) ACCESSIONS THROUGH SEED CULTURE**

**BY: ABERA TEKALIGN BONGIE**

**ADVISOR: BELACHEW SERAW (PHD)**

## **ABSTRACT**

*Sesame is one of the world's important oil crops. Its primary marketable products are the whole seeds, seed oil and meal. The problem of the study was in vitro propagation of sesame was used for sustaining of high yield through tissue culture; which have good character by preventing cross pollination. If the plant continues its generation with cross pollination productivity of yield will be gradually decreased through meiotic reproduction of gene variation. Therefore, this research was designed to develop mass in vitro propagation protocol for three sesame accessions from seed culture. The experiment was laid out in CRD with three replications in factorial arrangement. Ethanol (70%) was used for surface sterilization. Three sesame accessions were used for the experiment. For shoot initiation seeds were aseptically germinated in full strength MS basal medium supplemented with in combination of 0.25, 0.5, 1mg/l BAP with 0.1mg/l NAA, Initially the cultures maintained in dark condition at dark growth room without any illumination for 48 h at  $25 \pm 2^{\circ}\text{C}$  and then under 16 h light and 8 h dark photoperiod condition with the light intensity of 3000 lux. After 2 weeks the initiated shoot explants were transferred to shoot multiplication media that consisted of MS basal media and supplemented with combination of 0.5, 1 and 2 mg/l of BAP with 2 mg/l Kn for shoot multiplication treatments. MS media without plant growth regulators were used as control. For root induction well regenerated shoots were cultured on half strength MS medium supplemented with combination of 0, 0.25, 0.5, 1 mg/l IBA with 0.2 mg/l NAA. The cultures were maintained as before and the data were recorded for obtaining the rooting efficiency. The rooted in vitro regenerated plants after 4 weeks of culture on rooting medium were washed thoroughly under running tap water in order to completely remove agar. The cultures were maintained in a growth room for a month at a temperature of  $25 \pm 2^{\circ}\text{C}$  for 16 hour photoperiod. All results were compared to the control, almost all levels of hormone treatments had different on all parameters measured for shoot initiation, multiplication, and rooting experiments. Better performance in shoot initiation was 70.73 initiation percentages at combination treatment of 0.25mg/l BAP with 0.1mg/l NAA of accession 28306. The result of multiplication showed better at combination treatment 0.5mg/l with 2mg/l Kn gets 7.33 shoot number and at 0.5 mg/l BAP of 11.38 shoot length and has 80% shoot multiplication percentage at treatment 1mg/l BAP alone in accession 28310. However, for rooting treatment good result was obtained for accession 9693 in treatment combination of 0.5 mg/l BAP with 0.2 mg/l NAA while provided 4.83 number of root and length of root (cm) ( $p < 0.001$ ). Overall, the results of this study could be followed for in vitro propagation of the three accessions of sesame. The highest multiplication of shoot was on accession 9693 that of  $(7.33 \pm 0.76)$  in treatment combination of 0.5mg/l BAP with 2mg/l Kn.*

**Key words:-** explants, Plant growth regulators, shoot tip, accessions

# **ABUNDANCE AND SPECIES DIVERSITY OF DIURNAL MEDIUM AND LARGE MAMMALS AT HUMBO COMMUNITY MANAGED FOREST AREA, WOLAITA ZONE, ETHIOPIA**

**BY: ADANECH LEMA**

**ADIVISOR: WONDIMAGEGNEHUTEKALIGN (PhD)**

## **ABSTRACT**

*The study was taken under with the intention of assessing abundance and species diversity of medium and large sized diurnal mammals at Humbo Community Managed Forest Area, Wolaita zone, Ethiopia. The data were collected from November 2018 to July 2019 in both dry and wet seasons. The study area was stratified in to three major habitats, such as Riverine forest, Bush land and Open grass land based on the vegetation cover of the area. The study in each vegetation types were surveyed using the transect method. It was conducted on foot along a randomly selected transect lines. A total of eight large and medium mammalian species were identified and recorded in the study area. Based on the study, Artiodactyla was the largest order, while Bovidae was the largest family identified. In terms of relative abundance, Anubis baboon (28.4% and 28.1%) and Common Duiker (19.4% and 11.4%) were the most abundant species while, Warthog (12.1% and 8.9%) and Lion (0.7% and 0.4%) were the least during the wet and dry seasons, respectively. With respect to the distribution and habitat association of the species the bush land habitat comprised the highest number of species in both wet (n=7) and dry (n=7) seasons. The highest Simpson's diversity index and Evenness were obtained in the bush land (1.70 and 2.21) during wet and dry seasons, respectively. Overgrazing of livestock, human encroachment, poaching and deforestation were identified as major challenges of mammalian species of the study area. The study recommended the local; the regional and federal government along with the other concerned bodies should work together for the conservation of wildlife and to protect the area for sustainable management in Humbo forest.*

Keywords: Abundance, Conservation, Distribution, Mammals, Species

# MAGNITUDE AND DETERMINANTS OF TIMELY INITIATION OF BREAST FEEDING AMONG LACTATING MOTHERS, IN SODO TOWN WOLAITA ZONE, SOUTHERN ETHIOPIA

**By: ASTER SORSA (BSC)**

**ADVISOR: ABRAHAM MEGEZE (PhD)**

## ABSTRACT

*Timely initiation of breastfeeding tops the table of life-saving interventions for the health of the newborn. Even though most mothers in Ethiopia breastfeed their babies, they do not always follow the recommendations of the "National Strategy for Infant and Young Child Feeding." The objectives of this study was aimed to assess magnitude and determinants of timely initiation of breast feeding practices among lactating mothers of children aged less than 12 months of age in Sodo town. To attain the objective of the study, acommunity based cross sectional study was conducted from July 2018 to June 2019. Three hundred ninety six (396) mother infant pairs were selected using simple random sampling method. Structured questionnaire and were interview used to collect data. Descriptive statistics; logistic regression analyses employed to identify predictors of timely initiation of breastfeeding. The result of the study reveled that the prevalence of timely initiation of breastfeeding were 57.1%, mothers who had advised/ counseled during antenatal care follow up were 8.853 times more likely to initiate breastfeeding within one hour than those who had no advise during antenatal care visit(COR=8.853[CI=5.40,14.50]). Post-natal counseling was significantly associated with timely initiation of breast-feeding. Mothers who had got advise and counseling during post-natal care were 2.59 times more likely to initiate breast feeding than not counseled mothers 2.59[CI=1.49,4.49]). Mode of delivery were significantly related with timely initiation of breastfeeding (COR=139.84[CI=42.88, 456.08]. Mothers who delivered by normal or vaginal delivery had 139.84 times higher to initiate timely breast-feeding compared to caesarean section delivery. Mothers who had squeeze out first milk have significantly associated with timely initiation of breast milk (COR =2.05 [CI: 1.21, 3.471]; Mothers who squeeze out first milk had 2.05 times less likely initiate timely breast milk. The study showed that the prevalence of timely initiation of breastfeeding was low. A range of characteristics affects the practice of timely initiation of breastfeeding. Educational programs at health institutions and in the community level aimed to correct traditional inappropriate breastfeeding practices, provision of training to health professionals to promote appropriate timely counseling during antenatal care visit and postnatal period was recommended.*

**Key words:** Timely initiation, breastfeed, institutional delivery,

# **RELATIVE ABUNDANCE, DIVERSITY AND DISTRIBUTION OF BIRDS IN HAMLE 19 PUBLIC PARK, GULLELE SUB CITY,ADDIS ABABA,ETHIOPIA**

**BY: SHITA TESFAW**

**ADVISOR: ABEBAYEHU DESALGN (PH.D.)**

## **ABSTRACT**

*The study was carried out to estimate diversity, distribution and relative abundance of bird species in Hamle 19 Public Park in Addis Ababa, Gulelesubcity. It was conducted from September 2018 to July 2019. Point count method was used to investigate the species. Observation was conducted by periodically walking along the study area early in the morning (6:30-8:30a.m). Different diversity indices and statistical methods were used to analyze the collected data. A total of 21 bird species belonging to 5 orders and 15 families were identified in the study area during the wet and dry season surveys. During the dry season, highest avian diversity was observed in forest ( $H'=2.45$ ) followed by the Shrub ( $H'=1.99$ ) whereas during the wet season also a highest number of avian diversity was observed in forest ( $H'=2.52$ ) followed by shrub areas ( $H'=2.00$ ). The most common species was Mountain thrush (*Turdusabyssinicus*) and the least common species was Streaky Seedeater (*Crithagrastriolatus*). It is recommended that conservation of Parks by all concerned bodies should be practiced since the parks are suitable habitats for the avian species.*

**Keywords:** Abundance, Birds Diversity, Evenness, Habitats, Hamle 19 Public Park, Species

**HUMAN WILDLIFE CONFLICT IN DAMOTA MOUNTAIN  
COMMUNITY MANAGED FOREST OF SODO ZURIAW WOREDA ,  
SOUTHERN ETHIOPIA**

**BY: ESHETU WOLDEMARAM**

**ADVISOR: YIGEREM KEBEDE (Associate Prof.)**

**ABSTRACT**

*Human–wildlife conflict is a widely known situation where people and wildlife share common resources. The present study was conducted from October 2018 to July 2019. The aim of this research was to examine the human–wildlife conflict in Damota Mountain Community Managed Forest area. Purposive sampling technique was used to select villages and respondents from the three adjacent Kebeles of the study area. Data were collected through questionnaire and focus group discussion. The collected data incorporated the socio-demographic information of the respondents, the types, causes and impacts of human–wildlife conflict; the local community issues and the responsible wild animals for the crop damages and livestock depredation, and the attitudes of the local community towards wild animals and mitigation measures for the losses. Majority of the respondents (75 %) identified that crop damage was the most common type of human–wildlife conflict in the study area by which the local community was seriously suffered, that ultimately may lead to food insecurity. The most common types of wild animals involved in the crop damage were anubis baboon (*Papioanubis*) (42.8%), common warthog (*Phacochoerus africanus*) (16.0%), bushpig (*Potamochoerus larvatus*) (15.0%), vervet monkey (*Cercopithecus aethiops*) (13.5%) and porcupine (*Hystrix cristata*) (12.5%), in their decreasing order crop damage, respectively. Respondents identified the problematic wild animals in the predation of livestock include Leopard (*Panthera pardus*), Jackal (*Canis adustus*), hyena (*Crocuta crocuta*), Serval (*Leptailurus serval*) and Anubis baboon (*Papio Anubis*). The tendency of human attack by wild animals was mainly not common. The result of this study suggested that majority of the local farmers who were living in the nearby villages affected by human–wildlife conflict such as crop damage and livestock depredation which might lead to develop negative impacts up on the conservation of forest. So, to alleviate the existing problem sustainably, very urgent conservation management measures are needed by the collaboration of all concerned stakeholders.*

Keywords: Community, Conservation, Crop Damage, Human–Wildlife Conflict, Wild Animals

# **HUMAN-WILDLIFE CONFLICT: CAUSES, IMPACTS AND MANAGEMENT IN GURAGE ZONE AT MESKAN WOREDA, SOUTHERN ETHIOPIA**

**BY: NIGATU ALEMAYEHU JEBE**

**ADVISOR: WONDIMAGEGNEHU TEKALIGN (PhD)**

## **ABSTRACT**

*Human-Wildlife Conflict is a continuous problem in the world, and has a significant impact on both human and wildlife populations. The purpose of the study was to identify the causes and impacts of Human-Wildlife Conflict, and the responsible wild animals that cause the conflict in Meskan Woreda. Three Kebeles with six sample sites were selected purposively to collect data on the conflict. Target populations comprised to households and key informants were selected. The data were collected by questionnaire, one to one interview and direct field observation to estimate the extent of the crop loss using quadrats in the selected farmlands. Then, the data were analyzed using SPSS. The result of the finding indicated that three primate species (Anubis baboon, vervet monkey and grivet monkey) and other wild animal compositions (porcupines, rodents, birds and mongoose) were identified as pests. Among which, Anubis baboon, vervet monkey, grivet monkey, mongoose and porcupines were known as the worst pests. They were involved in crop raiding and mostly raid Maize (47.3%) followed by Teff (24.7%), Enset (16.3%) and barely (11.6%), respectively. About 53.8% of the crop damage was caused by Anubis baboon, 31.7% by Vervet monkey while only 14.5% of the damage was recorded by other pests. In this investigation, 43.9% of the farmland was covered by maize, 17.2% Enset, 15.4% Teff and 12.8% of it was barley. There was statistically significant in the size of cultivated areas between four crops types ( $F=267.197$ ,  $P= 0.0001$ ). Furthermore, livestock killing, destruction of bee hives and human disturbances were some of the problems observed in the area. Deforestation for farmland, human population explosion and the distance of the farmland from the village were some of the identified causes of Human-Wildlife Conflict. Moreover, the study identified permanent guarding of crop, chasing and placing scare crow were the major traditional methods used by the local people to prevent crop damage by the crop raiders. Therefore, educating peoples to change their perception towards the values of forests, wildlife, coexistence in harmony with the wildlife species, wildlife management as well as organizing landless youngsters to create job opportunities were important.*

**Key words:** Anubis Baboon, Crop Raiding, Human-Wildlife Conflict, Pest Primates, Wild Animals

**CURRENT POPULATION STATUS AND HABITAT PREFERENCE OF  
PLAINS ZEBRA (*Equus quagga*) BOEHM'S ZEBRA IN NECHISAR  
NATIONALPARK, SNNPR, ETHIOPIA**

**BY:**

**SHIMELIS ESHETU JAGISO**

**ADVISOR: -ABEBAYEHU DESALEGN (Ph.D)**

**ABSTRACT**

*The main purpose of this study was to examine the current population status and habitat preference of plains zebra in Nechisar National Park. Cross-sectional survey research design was employed. Data for the study were collected on the basis of qualitative and quantitative approaches. Distance sampling line-transect counting method was used to estimate the population status of plains zebra in the study area. Data were analyzed using SPSS computer software package and compared using frequency and percentage from descriptive statistics while t-test from inferential ones. The adult male to adult female sex ratio was 1:1.94 and 1:1.68, adult to unknown sex ratio was 1:0.69 and 1: 0.40 during dry and wet seasons respectively. Group size changed seasonally. The average number of wet season counts was 902 grouped in 72 herds (groups) and the mean group size was 11.6. During dry season the total count was 658 grouped in to 68 and the mean group size was 10.5. The most frequently observed group size was 12 animals in wet season and 7 animals in dry season. There was no significant difference in the age ratio observed during both seasons ( $P>0.05$ ). On average, 54.6% of the total population was adults and only 45.3% was young. There was a seasonal change in the preference of habitat. The main threats of plains zebras in the study are livestock grazing, habitat destruction and disturbances, bush encroachment, poaching and termite mount. The study recommends an effective and realistic management policy to control illegal human settlement and farming activities in the park.*

**Keywords:** Habitat Preference, Nechisar National Park, Plains Zebra, Population Status

**POPULATION STATUS, DISTRIBUTION AND HABITAT ASSOCIATION  
OF COMMON WATERBUCK (*Kobus ellipsiprymenus*, Ogilby, 1833 ) IN  
MAZE NATIONAL PARK, SOUTHWESTERN ETHIOPIA**

**BY: TAMIRAT BIHONEGN FANTA**

**ADVISOR: ABEBAYEHU DESALEGN (Ph.D.)**

**ABSTRACT**

*Common waterbuck, (*Kobus ellipsiprymnus* Ogilby, 1833) is an antelope found in Ethiopia. An investigation on the population status, distribution and habitat association of the Waterbuck in Maze National Park, Ethiopia was carried out during 2018–2019. The study area was stratified into four habitat types, viz., grass land with scattered trees, open grass land, bush land forests and Riverine forest habitat. Eight representative transects across the main habitat types were randomly laid and counts were carried out in around 20% of the area of 202 km<sup>2</sup>. The average estimated population of waterbuck in the park was 527 individuals. Males comprised 43.70%, while females 54.30%. Male to female sex ratio was 1.00: 1.27. Age structure was dominated by sub-adults, which constituted 55.70% of the total population, followed by adults (42.30%) and juvenile (2.0%). Larger herds of up to 27 individuals were observed during the wet season, while smaller groups of up to 6- 12 individuals were common during the dry season. The mean group size was 16.80 during the wet season and 9.40 during the dry season. They were mostly observed in the riverine habitat type around 1–2 km distance from permanent water source. Presence of water, abundance of food, vegetation cover and topographic features for predator avoidance were major factors governing the distribution of waterbucks in the study area. Proper conservation measures incorporating all stakeholders have to be implemented to solve the problems and safeguard the waterbucks in the Park.*

**Key words:** Distribution, Habitat association, Maze National Park, Population structure,

Sex ratio, Waterbuck.

### **3.2. Department of Chemistry**

# **Determination of Levels of Essential and Non-Essential Metals In Selected Traditional Medicinal Plants and Their Respective Supporting Soils in Raya**

**Azebo District, Northern Ethiopia**

**BY: TESHAY BAYRAY WELDO**

**MAJOR ADVISOR: MESFIN BIBISO (PHD, ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*The use of traditional medicine is increasing dramatically worldwide. In Ethiopia, more than 85% of the population relies on traditional medicine. The purpose of this study was determination of levels of Essential and Non-essential metals in plant roots of studied plants and their soils. The levels of selected essential metals (Mn, Fe, Cu, & Zn) and non-essential metals (Cd & Pb) have been investigated in the roots of Carissa spinarum L, Echinops kebericho, Verbascum sinaiticum, Verbena officinalis, and Solanum incanum and their respective soils. A total of five root samples and their soil samples with three replicates were used for determination of Essential and Non-essential metals using Atomic Absorption Spectrophotometer (AAS). The validation of these procedures was performed by spiking the samples with a standard solution of each metal having a known concentration and percentage recovery values were determined. A wet digestion procedure involving the use of mixture of (69-72%) HNO<sub>3</sub>, (70%) HClO<sub>4</sub>; and (30%) H<sub>2</sub>O<sub>2</sub> for plant and soil samples, respectively. Based on the results, Zn 21.82 mg/kg in Solanum incanum was the predominant metal followed by Fe 7.78 mg/kg in Carissa spinarum L plant samples, Mn (1.70-4.22 mg/kg), Cu (1.34-3.42 mg/kg), Pb (0.14-0.34 mg/kg) but Cd was detected only in Carissa spinarum (0.15 mg/kg) and in Solanum incanum (0.21 mg/kg) plants. For soil samples Zn (15.45-44.3 mg/kg), was the most dominant metal followed by Mn (9.54-23.07 mg/kg), Fe (7.58-12.68 mg/kg), Cu (3.16-12.55 mg/kg), Pb (0.14-2.85 mg/kg) and Cd was detected only in Boyegararsa (0.21mg/kg), Warabaye (0.65mg/kg) the result of studied soil samples showed that Ca ranged between (220.87 to 380.83mg/kg), K (90.0 to 395.63 mg/kg) and Mg (37.33 to 63.47 mg/kg). The concentration of P ranged between (25.58-37.74), TN% (0.09-0.16), and OC% (1.31-2.66). The sampled soils were found to be between pH of (6.81-7.99) from neutral to moderately alkaline soil, electrical conductivity (0.12- 0.21 ds/m). The results showed that the content of the metals could not exceed the permissible limit/amount for medicinal plants set by WHO and FAO. Further research should be carried out on the bioavailability of toxic heavy metals and phyto chemistry of medicinal plants.*

**Key words:** Essential metals, non-essential metals, medicinal plant, soil

# DETERMINATION OF ESSENTIAL METALS AND NUTRITIONAL VALUE OF SELECTED ENSET (*ENSET VENTRICOSUM*) VARIETIES IN CORM GROWN IN OFA WOREDA, WOLAITA ZONE, SOUTHERN ETHIOPIA

BY: WONDIMU WONTE

ADVISOR: DR ALEMU LELAGO (ASSOCIATE PROFESSOR)

## ABSTRACT

*Enset (*Ensete ventricosum*) is a perennial, banana-like crop which is indigenous to Ethiopia. It is an important food crop. Besides, it is used as animal feed, as well as source of medicine and fiber. This study was conducted to determine some metals and Nutritional value of selected Enset varieties (namely: Geennaa, Kattaniya and Ciiciya) grown in Ofa woreda, Wolaita zone, Southern Ethiopia. The samples were collected from six representative kebeles (Sadoye, Yakima, Okoto, Waraza, Dekeya and Geleko) in Ofa woreda in December 2019 G.C. Determination of metals was made by graphite furnace atomic absorption spectrometry. The percentage recoveries of the metals were in the range of 83% to 120%. The ranges of the concentrations (in mg/100g) of the metals on dry weight basis are: Mg (24.14 – 29.10), K (29.79 – 36.49), Ca (33.06 – 39.15), Fe (0.179 – 0.545), Cu (0.0169 – 0.0727), Zn (0.078 – 0.633), Cd (0.00170 – 0.00949). Lead was below detection limit and thus it was not detected. The obtained result implies that the Enset is rich in calcium, potassium and magnesium and has the least concentration of cadmium compared to others. The concentration of calcium is the highest among the determined metals. The results also revealed that Kattaniya variety had higher values of protein (0.296 – 0.423 %), fiber (2.013 – 2.24 %), fat (0.526 – 0.66 %), carbohydrate (48.08 – 50.645 %) and energy (199.43 – 208.95 kcal/100g) content. On the other hand, Ciiciya variety was found to be high in ash content (1.045 – 1.276 %) and Geennaa variety was found to be high in moisture content (51.43 – 56.53 %). In general, this study implies that Enset is one of the tuber crops which have the highest content of calcium, carbohydrate and energy but the least content of protein from proximate analysis and cadmium from metals.*

**Key words:** Enset, *Enset ventricosum*, Acid digestion, Graphite furnace atomic absorption spectroscopy, proximate composition

# LEVELS OF ESSENTIAL AND NON-ESSENTIAL HEAVY METALS IN SELECTED VEGETABLES GROWN IN URBAN AREA OF WOLAITA ZONE, SOUTHERN ETHIOPIA

BY: DESALEGN MENA DEDE

MAJOR ADVISOR: ALEMU LELAGO (PH.D)

## ABSTRACT

*Vegetables have become an integral part of human's diet due to their nutritional values. Thus, any form of contamination especially by heavy metals is of great concern. The purpose of this study was to analyze the contents of selected essential and non-essential heavy metals, (Fe, Zn, Cd, Cr and Pb) in the vegetables, and the soils on which the vegetables were grown, using flame atomic absorption spectrometry (FAAS). The optimized wet digestion procedure was employed to solubilize the metals from the samples. The validation was performed by spiking the samples with a standard solution of each metal having a known concentration and the percentage recovery values in the range of 90.0–100% percentage for soil, and 98-111% sampled vegetables were obtained. The results obtained from this study showed overall concentration of heavy metals, Fe in the range of  $(5.04 \pm 0.02$  to  $6.47 \pm 0.06$  mg /Kg ) and Zn in the range of  $(0.43 \pm 0.00$  to  $4.26 \pm 0.07$  mg /Kg) in the edible parts of sampled vegetables and Cd, Cr and Pb were below the method detection limit Whereas, concentrations of the metals in the soil samples were found to be, Fe in the ranges of  $(15.33 \pm 0.11$  to  $15.80 \pm 0.11$  mg /Kg), Zn in the ranges of  $(1.74 \pm 0.14$  to  $2.31 \pm 0.00$  mg /Kg) and Cd in the ranges of  $(0.50 \pm 0.00$  to  $0.73 \pm 0.00$  mg /Kg) and Cr and Pb were below the method detection limit. The concentrations of heavy metals (Cd, Cr and Pb) in the selected vegetable samples were below the method detection limit of both WHO and FAO. Therefore, regular monitoring of vegetables is essential to prevent excessive build-up of the heavy metals in food. Thus, the health risk and the extent of heavy metal contamination can be reduced.*

**Keywords:** - Heavy metals, health risk, Solubilize , Vegetables

# **STATUS OF CHEMISTRY LABORATORY ACTIVITIES FOR ENHANCING PRACTICAL WORK IN SELECTED SECONDARY AND PREPARATORY SCHOOL OF DAWRO ZONE, SOUTHERN ETHIOPIA**

**BY: ALEMAYEHU ATARIYAW LUGO**

**ADVISOR :MESFIN BIBISO (PHD , ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*Laboratory for Chemistry is primary vehicle for promoting formal reasoning skills and students' understanding, thereby enhancing desired learning outcomes in students. The major purpose of this study was to assess the practice and problems in Chemistry laboratory activities in the secondary and preparatory school of Dawro Zone, Southern Nations, Nationalities and People's Region. This study was conducted in seven government secondary and preparatory schools from one Town administrative and six Woreda administrative from Dawro Zone. The Woreda education offices and secondary and preparatory schools were selected by purposive sampling techniques based on the proximity. The school teachers and Woreda education supervisor were selected by availability sampling techniques while principals expert were selected purposely. Students were selected by systematic sampling techniques. Primary data were gathered from 34 teachers, 7 laboratory technicians, 7 principals, 4 educational offices experts and 340 students by questionnaire, interview and observation and secondary data were collected from documents such as annual plans and laboratory reports, annual reports. The data gathered through questionnaires were analyzed using percentages and mean. The findings of this study indicated that: - (i) The current status of laboratory works in secondary schools of Dawro Zones is in a very low level where chemistry teaching learning process is not supported adequately by laboratory works; (ii) the most determinant constraints of laboratory activities in secondary and preparatory schools included inadequate supply of lab equipments, reagents and facilities (75%), absence of trained laboratory technicians/teachers (67.9%), too short period allocated for practical work (67.6%), lack of laboratory rooms, lack of commitment and interest of teachers, poor management, monitoring and evaluations of laboratory activities. (iii) Laboratory activities did not get the necessary concern in all schools investigated by this study. Therefore, to bring the progress of laboratory activities in schools and to play a great role in initiating and supporting chemistry teaching, there should awareness creation by all stakeholders of the education system. Current and regular workshops and short term trainings about laboratory activities should be given to chemistry teachers in order to enhance and update their laboratory skills and capacities to carry out experiments and demonstrations more effectively and efficiently. The respondents agreed that the government should give special consideration and effective implementation strategies for the improvement and efficient ways of chemistry teaching in schools in order to achieve the mission and goals of the new education policy.*

**Keywords:** Laboratory, Practical Work, Students' Performance, Chemistry, Laboratory Skills.

# PROXIMATE AND PHYSICOCHEMICAL CHARACTERIZATION OF MORINGA STENOPETALA THROUGH SOXHLET EXTRACTOR IN SELECTED AREAS OF DAWRO ZONE, SOUTHERN ETHIOPIA

BY: ELIYAS BEFIKADU GABABO

MAJOR ADVISOR: MESFIN BIBISO (PHD, ASSOCIATE PROFESSOR)

## ABSTRACT

*Moringa Stenopetala* (locally called “Halakko”) is the best known of 14 species in the genus *moringa* of family *moringaceae* has gained attention due to its multipurpose uses such as food source, medicine and seeds oil production. The aim of this study was to determine the proximate values and physicochemical analysis of *Moringa stenopetala* seeds and seeds oil. A triplicate seed samples were separately obtained from five sites in a selected areas of Dawro zone. The 15 samples were subjected to extraction of the oil contents. The crude oil yield from the seeds were 38.20% for Deneba, 30.22% for Yello Worbati, 31.50% for Lala Ambe, 40.18% for Zima Waruma and 29.41% for Ella Bacho respectively. The results of proximate analysis revealed that the moisture content of the seeds were in the range of 7.23% to 10.52%. The Ash contents ranged from 4.91% to 5.77%. The crude fiber for these seeds ranged from 6.88% to 8.55%. The crude protein content was ranged from 26.07% to 30.01%. The highest crude oil yield and lowest moisture content were found from Zima Waruma and the lowest oil yield and highest moisture content were found from Ella Bacho. The higher ash, higher fiber and higher protein content were found from Deneba whereas lower ash and lower protein content from Zima Waruma. The physicochemical parameters of Deneba, Yello Worbati, Lala Ambe, Zima Waruma and Ella Bacho crude oils were: pale yellow color, odorless property and Refractive Index (1.464) for each the entire varieties, Relative Density (0.88, 0.85, 0.86, 0.88, 0.85) g/cm<sup>3</sup>, Specific Gravity(0.90, 0.90, 0.89, 0.92, 0.87), Free Fatty Acid (1.05, 1.19, 1.10, 1.06, 1.39) mgKOH/g, Acid Value (1.77, 1.62, 1.09, 1.72, 1.20) mgKOH/g, Peroxide Value (9.29, 8.67, 9.61, 9.39, 8.53) meq/kg, Saponification Value (173.23, 172.89, 178.53, 176.27, 179.67) mgKOH/g, Iodine Value (71.23, 69.10, 78.53, 78.93, 68.57) gI<sub>2</sub>/g and pH value (6.83, 6.95, 6.65, 7.04, 6.86) respectively. The lower physicochemical parameters were recorded for Ella Bacho and the higher result obtained for Zima Waruma and Deneba respectively. The results of these analyses were subjected to in agreement with standard values of Association of Analytical Chemist (1990) and FAO/WHO (2009). Further study should be done to determine fatty acids composition, vitamins and antimicrobial activities of *Moringa stenopetala* seed oils.

**Key words:** *Moringa stenopetala*, Soxhlet extractor, proximate composition, physicochemical analysis.

# DETERMINATION OF HEAVY METALS CONCENTRATION AND PHYSICO-CHEMICAL PROPERTIES OF DRINKING WATER IN ROBE TOWN SOUTH EASTERN ETHIOPIA

BY: NIGUSSIE MENDISU  
ADEVISOR: ALEMU LELAGO (PH.D.)

## ABSTRACT

*Water is a very essential constituent of life, and the availability of good quality water is an indispensable feature for preventing diseases, keeping human health and improving quality life. The present study was undertaken to determine the physico-chemical properties and heavy metals in drinking water samples collected from different sources in and around Robe town. Water samples were collected from different sources like borehole and springs. The pH, Electrical conductivity, Total Dissolved Solid, TSS, TS, Hardness, Concentrations of Chloride ion and the concentrations of Lead, Iron, Chromium, Copper and Cadmium were determined and data analyzed using SAS. The physico-chemical and heavy metal concentration analysis in borehole and spring water revealed that, samples from the spring water were within the World health organization standard but samples collected from borehole shows high permissibility of TDS, TSS, TS, EC, TH, Iron, Lead, Cadmium, and Chromium concentration and low pH,  $Cl^-$  and Cu concentrations. Out of the water samples collected from above mentioned sources, samples from borehole were very hard water, high level of EC, TDS, TSS and above the recommended level of heavy metals Fe, Cd, Cr, Pb but water samples from springs are within the acceptable limits as prescribed by EDWQ (2010) and WHO (2008) standards for quality of drinking water. The levels of iron, chromium lead and cadmium were more than the permissible limits in all samples from borehole.*

# **EVALUATION OF SELECTED HEAVY METALS LEVEL AND PHYSICO-CHEMICAL PARAMETERS IN SPRING WATER FROM NORTH WEST TIGRAI, ETHIOPIA**

**BY: ABRHALEY BERHANE GEBREMARIAM**

## **ABSTRACT**

*Natural water bodies contaminated with untreated waste water from increasing population, agricultural activities, urbanization, and municipal run off, and industrialization contain higher concentration of heavy metals. The purpose of this study was to determine the level of heavy metals (Fe, Zn, Cd, Pb, Cu, Mn, and As) in spring water of some selected sites of North West Tigray, Ethiopia, using inductively coupled plasma-optical emission spectrometer (ICP-OES). A total of six spring water samples were collected from six densely populated rural areas of the region, viz: May-Adrasha, May-Kiromto, Meskebet, May-Daero, May-Hargets, and May-Brazio. All the samples were analyzed for five physicochemical parameters such as temperature, pH, Electrical Conductivity, Total Dissolved Solids (TDS), and alkalinity using standard procedures. The concentration of As varied from 0.033 to 0.07, Pb varied from 0.012 to 0.04 and that of Fe ranged from 0.02 to 0.338 mg/L. But the remaining heavy metals Zn, Cd, Cu, and Mn were below permissible limit in spring water samples of the selected sites. Similarly, temperature varied from 23.4 to 23.9 0C; pH ranged from 6.15 to 8.06, EC varied from 0.06 to 0.66  $\mu$ s/cm; TDS value varied from 47.4 to 528.4 and alkalinity varied from 47.3 to 426 mg/L for spring water samples of the selected sites. Temperature of spring water samples (except that of May-Brazio; pH (except that of May-Hargets; TDS (except that of Meskebet site); EC and Alkalinity were below the permissible limit of WHO guidelines. The result revealed that the concentration of Arsenic metal in spring water samples of selected sites were higher than the WHO recommended level, whereas the concentration of Pb and Fe metals were found to be within WHO guidelines. Therefore, attention must be given for controlling the level of heavy metals that violate the aesthetics limits of the World Health Organization.*

# Investigation of Nutrients and Proximate Analysis of Selected Taro Varieties and Soil in which it grows around Wolaita Zone, Southern Ethiopia

BY: ADISU PETROS BELATE

ADVISOR: MESFIN BIBISO (PHD, ASSOCIATE PROFESSOR)

## ABSTRACT

*Taro (Colocasia esculenta) of the family Araceae is a staple food throughout subtropical and tropical parts of the world. The main aim of this study was to investigate nutritional value of taro varieties grown in Wolaita Zone, southern Ethiopia. In this study, wet digestion procedure to the mixture of 2ml of  $\text{HNO}_3$  and 2ml of  $\text{HClO}_4$  at an optimum temperature and time duration were used to determine the amount of nutrients from the taro plant using FAAS. Based on the results, proximate analysis revealed by percentage (%): Dry matter of Molliya (91.5 to 92.211), Gala (92.2 to 93.40) and Boloso-1 (91.2 to 92.2), moisture of Molliya (7.7 to 8.3), Gala (6.6 to 7.8) and Boloso-1 (7.81 to 8.8), ash of Molliya (3.43 to 3.81), Gala (3.6 to 3.9) and Boloso-1 (3.43 to 3.6), fiber of Molliya (4.15 to 4.6), Gala (4.50 to 4.7) and Boloso-1 (4.45 to 5), fat of Molliya (4.5 to 5.7), Gala (4.82 to 5.9) and Boloso-1 (4.02 to 5.1), protein of Molliya (4.15 to 6), Gala (4.51 to 4.7) and Boloso-1 (4.5 to 5.1), Carbohydrate of Molliya (74.02 to 74.54), Gala (73.69 to 75.9) and Boloso-1 (74.07 to 75.02) and energy of Molliya (357.69 to 364.6), Gala (360.48 to 366.7) and Boloso-1 (354.4 to 358.96). The concentration of nutrients ranged of K (1.52 to 1.86) mg/100g, Na (24.64 to 33.11) mg/100g, Mg (18.67 to 25.49) mg/100g, Fe (8.76 to 16.38) mg/100g, Cu (1.25 to 2.55) mg/100g, Zn (0.71 to 1.91) mg/100g and Ca (4.46 to 6.8) mg/100g. Moreover, low fat and protein but high carbohydrate and energy content were recorded in three taro varieties. However, rich in Na, Mg and Fe when compared to other nutrients but Mn was below detection limit in three taro varieties. The physico-chemical properties of soil showed that the soils are acidic and low available P. In general, the studied taro varieties contain high level of Mg, Na, Fe and Mn below level of detection limits and high content of carbohydrate, energy value but low fat and protein content. Nutrient and proximate analysis in taro varieties were compared with recommended maximum permissible level of WHO/FAO. Further studied should be carried out the heavy metals, antioxidant nutritional value and antioxidants of the same varieties.*

**Keyword;** Taro, Nutritional Value, Proximate composition, Wet-digestion.

# DETERMINATION OF HEAVY METAL LEVELS AND ASSESSMENT OF PHYSICO-CHEMICAL PROPERTIES OF DRINKING WATER IN SODO ZURIA WOREDA, SOUTHERN ETHIOPIA

BY: AKLILU KUTAFO UKE

MAJOR ADVISOR: MESFIN BIBSO (PHD, ASSOCIATE PROFESSOR)

## ABSTRACT

*Contaminants and toxic substances in the drinking water can affect the water quality and as a result the human health. This study was aimed at determining the levels of heavy metals and assessing the physico-chemical properties of spring and tap water in selected areas of Sodo zuria district of Wolaita Zone, Southern Ethiopia. Water samples from six spring sites and four tap sites were collected and analyzed for physico-chemical properties and heavy metals. Prior to analysis, the water samples were pre-concentrated and the residue dissolved in 0.1M HNO<sub>3</sub>. Six different spring water samples and four different tap water samples with triplicates were analyzed for Cu, Fe, Zn, Pb, Cr and Cd content and their concentration levels were compared with WHO, EUEPA, USEPA and ESA specific maximum levels. The concentration of Fe determined in the spring water was ranged from 0.304-1.575 mg/L; in tap water ranged from 0.386-0.825 mg/L. Cu in the spring water ranged from 0.551-0.68 mg/L; in tap water 1.287 mg/L, Zn in the spring water was ranged from 0.194-0.505 mg/L; in tap water ranged from 0.18-2.7 mg/L. Pb was only detected in tap water of Gulgula site and its concentration was 0.085mg/L. The metals Cr and Cd were not detected in all water samples. The analysis of heavy metals in drinking water indicated that Zn had maximum concentration followed by Fe, Cu, and Pb. The concentration of all metals except Fe and Pb were found to be within the permissible limit set by WHO, EUEPA, USEPA and ESA drinking water guidelines. The results of the physico-chemical properties obtained were in the range of: Hardness (250-400.08 mg/L), Alkalinity (40-79.9 mg/L), Total Suspended Solids (10-60.03 mg/L), Chloride (29.26-67.06 mg/L), Total Solids (5.88-35.29 mg/L), Conductivity (54.6-151.76  $\mu$ s/cm), Total Dissolved Solids (30.48-85.06 mg/L), pH (6.13-7.4), Temperature (21.6-26.13 °c) and Turbidity (2-7 NTU). The physico-chemical properties of all sites were within the permissible limit except turbidity and pH in spring water. From the findings of this study, it is suggested that continues water quality monitoring should be carried out to check the levels of heavy metals and physico-chemical properties. Further study has to be continued on analysis of other heavy metals, bacteriological and physico-chemical properties of drinking water in other sites.*

**Key words:** Water quality, heavy metals, physico-chemical properties, spring water, tap water

**INVESTIGATION ON THE NUTRITIONAL VALUE AND SELECTED METALS IN AVOCADO FRUITS AT HADERO ZURIYA WOREDA, KEMBATA TEMBARO ZONE, SOUTHERN ETHIOPIA**

**BY: ABAYNEH ABERA GURACHA**

**MAJOR ADVISOR: ALEMU LELAGO (PHD, ASSOCIATE PROFESSOR)**

**ABSTRACT**

*Avocado or butter fruit is a tropical fruit scientifically known as *Persea americana*, which belongs to the family Lauraceae. It is one of the most important fruits in the world. The results obtained showed that the investigation samples contain avocado fruits of Fuerte, Hass and Zutano varieties. In this study dried flour sample were prepared from the avocado varieties. The samples were digested in wet digestion using of  $HNO_3$  and  $HClO_4$ . The studies had shown that avocado is a fruit rich in nutrient and minerals. The proximate continent revealed that the fruit of all avocado variety were more fat than other compositions were grown in Hadero Zuriya woreda at Hadero districts were studied. In both varieties ranged moisture, ash, fat, fiber, protein and carbohydrates contents of fruit flour ranged from 79 to 86%, 1.68 to 1.91%, 3.5 to 3.6%, 1.3 to 1.42%, 1.84 to 1.87% and 5.52 to 11.62% respectively. The relative abundance of metals in both varieties fruit ranged in sequence Mg (21.81mg/l) > Ca (12.01mg/l) > Na (4.33/l) > Zn (1.14mg/l). There is no significance difference between the three samples. The results showed that, the investigated fruit samples are the main sources of essential nutrients and safe for human consumption.*

**Keywords:** Proximate, *Persea Americana*, avocado fruit, Nutrition and total minerals, FAAS

# DETERMINATION OF THE LEVELS OF HEAVY METALS IN SELECTED SOFT DRINKS CONSUMED IN MOYALE CITY, ETHIOPIA.

BY::NEGEWO SAFAWO

ADVISOR: MESFIN BIBISO (PHD, ASSOCIATE PROFESSOR)

## ABSTRACT

*Soft drinks required special attention to the purity and uniformity of ingredients, raw materials, sources of water and packaging material which are actually the source of impurities in the drinks. The purpose of the current study was to determine the levels of selected heavy metals; Cu, Fe, Zn, Ni, Cd, and Pb in plastic bottled soft drink (Coca-cola, Sprite, Fanta, Fanta-anance, Mirinda and Pepsi) consumed in Moyale city of Ethiopia. A microwave digestion procedure involving the use of a mixture of 1:3 of 69-72% HNO<sub>3</sub> and 30% HCl at an optimum temperature and time duration were used to prepare the clear solution for determination of selected metals from the soft drinks using Flame Atomic Absorption Spectrometer (FAAS). Based on the analyzed soft drink samples, the concentrations of Fe, Zn, Cu, Ni, Pb and Cd, were ranged from 0.41±0.02 mg/l to 0.49±0.01mg/l, 1.34±0.01mg/l to 2.34±0.02mg/l, 0.64±0.02mg/l to 1.16±0.04mg/l, ND, ND and 0.83±0.01 to 0.94±0.009mg/l respectively. The results showed that the concentration of studied metals Fe, Zn, Cu, Ni and Pb were found below the recommended safe limits for drinking water set by WHO. And among the toxic heavy metals, the concentration of Cd was found above safe limits set by WHO. Further studies should be carried out on the determining of levels of other toxic metals in different types of soft drinks under study.*

**Keywords:** Soft drinks, Heavy metals, Flame Atomic Absorption Spectroscopy,  
microwave digestion

# DETERMINATION OF SELECTED ESSENTIAL AND NON- ESSENTIAL METALS IN *MORINGA STENOPETALA* LEAVES CULTIVATED IN WOLAITA ZONE, SOUTHERN ETHIOPIA

BY: TEMESGEN HOMBEBO  
MAJOR ADVISOR: ALEMU LELAGO (PHD)

## ABSTRACT

*Recently, Moringa stenopetala has gained attention in Ethiopia due to its multiple uses. It is fast growing plant and mainly maintained for nutritional value. Research related to the determination of metals in Moringa stenopetala leaves grown in Wolaita zone was scarce. The objective of the study was to determine the levels of selected essential and non-essential metals in moringa plant leaves cultivated at Humbo district in Wolaita Zone. Optimized digestion mechanism was selected during determination of metals in Moringa stenopetala leaves samples. The levels of some selected essential (Ca, K, Fe, Zn) and non essential (Pb, Cd) metals in Moringa stenopetala were determined by using Flame Atomic Absorption Spectrometer (FAAS). The result revealed that Moringa stenopetala leaves have the capacity to accumulate relatively higher amount of Ca and Fe among the determined essential metals. The concentration ranges in dry weight basis in decreasing order for of: Ca (20.82-28.73 mg/kg) > Fe (5.78-6.83 mg/kg) > K(1.62-2.05 mg/kg) > Zn (0.73-1.18 mg/kg) > Pb (0.22-0.38 mg/kg). The concentration of Cd was below the limit of detection. Moderate positive correlation was seen between potassium and zinc in Moringa stenopetala leaves. The non-essential metals determined in this study were below the permissible ranges as presented by FAO/WHO standard. Hence, the studied plant is safe for dietary and medicinal uses with respect to determined metals.*

**Keywords:** Atomic absorption spectroscopy, Essential metals, *Moringa stenopetala*, Non-essential metals.

# **DETERMINATION OF SOME TRACE METALS AND PHYSICO-CHEMICAL CHARACTERISTICS OF DRINKING WATER IN BASKETO SPECIALDISTRICTS, SOUTHERN ETHIOPIA**

**BY: MOHAMOD MESSA**

**MAJOR ADVISOR: MESFIN BIBISO (PHD, ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*Water is the most vital liquid for maintaining life on the earth. In addition, it is the first need for human and other living things survival, industrial development, and for so many vital purposes. Natural water bodies contaminated with untreated waste waters from increasing population, agricultural activities, urbanization and municipal runoff, and industrialization contain higher concentration of trace metals. The purpose of this study was to determine the level of trace metals (Cd, Cr, Cu, Fe, Pb, and Zn) in drinking water of some selected sites of Basketo special district, using Flame Atomic Absorption Spectrometer. Wet digestion procedures were used for analysis of the water samples. The concentrations of Fe varied from 0.387 to 0.604 mg/l which is out of MPL of standards. Cu concentration varied from 0.030 to 0.101 mg/l. The concentration of Zn ranged from 0.17 to 0.288 mg/l. The concentration of Cd ranged from 0.0012 to 0.012 mg/l. Cr concentration ranged from 0.004 to 0.037 mg/l; and the concentration of Pb was found 0.014 mg/l in all sampled sites i.e. it was found that Fe and Cd concentration was slightly highest amount among the trace metals in the studied area, and the lowest ones are the concentration of Cu and Zn was detected in the spring water. Similarly, temperature and pH are not significantly different. EC varied from 206 to 240.13  $\mu\text{S/cm}$ ; TDS value varied from 201.33 to 241.35 mg/l and TSS varied from 488.66 to 778.00 mg/l; TA ranged from 160.00 to 195.33 mg/l; TH ranged from 348.33 to 419.00 mg/l; Cl<sup>-</sup> ranged from 8.80 to 16.43 mg/l for drinking water samples of the selected sites. Except the values of TH, TSS and TDS all, the remaining physic-chemical parameters were within the permissible limit of World Health Organization guidelines. The level of mean concentration of all selected trace metals in all seven sampled sites were within and below the permissible values stated by World Health Organization. Therefore, attention must be given for controlling the levels of Fe and Cd concentration, TH, TSS & TDS values that violated the aesthetic limits of the World Health Organization. Further study should be carried out biological parameters of significant health concern and on the identification of the potential sources of the human contaminants including other trace metals because, water is life for all living and non-living thing, by WHO.*

**Key words:** Flame Atomic Absorption Spectroscopy, trace metals, physicochemical parameters, Wet digestion.

### **3..3 Department of Physics**

**ISOLATION AND CHARACTERIZATION OF BIOACTIVE  
COMPOUNDS FROM ALOE OTALLENSIS ROOT EXTRACT USING  
NUCLEAR MAGNETIC RESONANCE AND INFRARED  
SPECTROSCOPES**

**BY: ASRAT EMIRU MEJA**

**ADVISOR: KUSSE GUDISHE (PHD)**

**ABSTARCT**

*This study was conducted aiming to isolate and characterize the bioactive compound from aloe otallensis roots extracts for medicinal purpose .The compound were with different solvent system sequentially (n-hexane, dichloromethane/methanol (1:1) and methanol using maceration technique. The phytochemical analysis confirmed the presence of alkaloids, saponins, flavonoids, phenols, steroids, glycosides, terpenoids and tannins. Crude extract afg knnngof methanol was selected depending on an excellent TLC profile isolation of pure compounds. Two different compounds were isolated and the compounds were characterized using spectroscopic techniques (IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and DEPT-135). The results signifieldd that the two isolated and characterized compounds were 8-acetoxy -8, 9 ,9a ,10-tetrahy drobenzo [g] isoquinoline-2 (3H)-carboxylic acid and 7-acetoxy – 7, 8, 9 – dihydrobenzo [g] oxy-nitro isoquinoline -2 (5aH) - carboxylic acid . This compounds are alkaloids and used for antibacterial infection treatment. This supports the knowledge of the community.*

**Key words:** Crude, isolation, characterization, ALOE VERA, IR, NMR

**DETECTION OF ADULTERATION OF RED CHILE WITH CARROT  
AND RED CLAY SOIL USING ULTRAVIOLET VISIBLE  
SPECTROSCOPY IN WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: AKLILU ABERA GIZAW**

**MAJOR ADVISOR: KUSSE GUDISHE (PHD)**

**ABSTRACT**

*A study was conducted on “Detection of adulteration of chili powder with carrot and red clay soil using ultraviolet visible spectroscopy in wolaita zone, southern Ethiopia”. This study was carried out to solve problems of Chile adulteration with carrot and soil in markets of wolaita zone. The study used UV/VIS spectrophotometric method to identify chili adulteration with carrot and red clay soil respectively. The identification of adulteration was achieved by comparing measured compound concentration in pure and adulterated Chile powders (i.e. capsaicin concentration in carrot mixed Chile, compared to pure Chile and ascorbic acid concentration in soil mixed Chile, compared to pure Chile). Capsaicin is a compound giving pungency to Chilies and does not exist in carrots. Chile also contains ascorbic acid which does not exist in red clay soil. The peak absorbance wave length for capsaicin was 280nm and the peak absorbance wave length for ascorbic acid was 521nm. Chile is mixed with soil in the ratio 5.6:1 where as chile was mixed to carrot in the ratio 9:1. The calibration equation for standard capsaicin was found to be  $Y = 0.755X + 0.047$  (Krupa et.al,2014). The concentration of capsaicin in pure and carrot adulterated Chile powder was found to be  $0.5965 \pm 0.000129$ mg/l and  $0.4168 \pm 0.0000816$ mg/l respectively. The difference in concentration due to adulteration was found to be statically significant  $P < 0.00045$ . The calibration equation for standard ascorbic acid was found to be  $Y = 0.0382X + 0.0071$ . The concentration of ascorbic acid in pure and soil adulterated Chile was found to be  $11.628272 \pm 0.002618$ mg/l and  $6.494764 \pm 0.003999$ mg/l respectively. The difference in concentration due to adulteration was found to be statically significant  $P < 0.005$ .*

**Key words;** Capsaicin, Ascorbic acid, Clay soil, Absorbance, Concentration.

**DETERMINATION OF SELECTED ESSENTIAL AND NON ESSENTIAL METALS IN ABAYA BILATE RIVER USING INDUCTIVELY COUPLED PLASMA OPTICAL EMISSION SPECTROMETRY IN WOLITA ZONE, SOUTHERN ETHIOPIA**

**BY: MELAKU ABRAHAM AGA**

**MAJOR ADVISOR: KUSSE GUDISHE (PHD)**

**ABSTRACT**

*Attempt has been made to look into determining the concentration of some selected essential metals (Fe, Zn, Cu, Ni, Co, Mn and Cr) and non-essential metals (Pb, As, Sn, Cd, B and Hg) elements in Abaya Bilate River using Inductively Coupled Plasma Optical Emission Spectroscopy techniques(ICP-OES) through the process of a Wet digestion method. Results revealed that maximum concentration is found in Fe (19,876.31 µg/L) and the minimum one is recorded in Co concentration (7.89 µg/L) in essential elements while the maximum is obtained in Hg (16.44 µg/L) and the lowest concentration is indicated in As (9.65 µg/L) in non-essential elements while the maximum is obtained in targeted in Pb (17.66µg/L) this research. The concentrations of essential elements are found in desired amount. The concentrations of all the elements measured in different sites are statistically insignificant. This study result showed that all the non-essential elements which are dangers for humans when taken above the permissible amount are found above the limit of WHO and FAO. As to this result, water from this river demands treatment prior to use for community.*

**Key words:** - Concentration, essential metal, non-essential metals and permissible.

**OBSERVING AND MODELING GEOMAGNETIC STORM RELATED VARIATION  
OF IONOSPHERIC TOTAL ELECTRON CONTENT (TEC)  
OVER BAHIR DAR, ETHIOPIA DURING THE YEAR 2010-2014 G.C**

**BY: YOSEPH ADAMU BELAY**

**MAJOR ADVISOR: TSEGAYE KASSA (PHD)**

**ABSTRACT**

*This thesis aimed at investigating the variations of vTEC as a function of geomagnetic storm parameters, (IMF) Bz, SWS and Dst index, over Bahir Dar (11. 6°N and 37. 36°E), Ethiopia in the year from 2010 to 2014. Observing and modeling geomagnetic storm related the variations of ionospheric vTEC in the year from 2010 to 2014 is more preferable than using short time data series of in the year from 2013-2014. Four data types are used in this thesis, (IMF) Bz, SWS, Dst index and TEC. Measurements were taken during the period of 2010-2014 for successive five years and analysis was done on only the geomagnetic storm events with the use of linear model. The daily variations vTEC recorded maximum and minimum values which are depends on the orientations and magnitudes of geomagnetic storm parameters. The variations of vTEC due to the effect of geomagnetic storm parameters (IMF)Bz, SWS and Dst index has shown that the gradual increment from 2010 (solar minimum) to (2014) solar maximum periods. Therefore, the variations of vTEC in almost proportional to the variations of geomagnetic storm parameters. We have investigated that the variations of (IMF)Bz are a better controller of vTEC, as compared to SWS and Dst-index and from my recommendation the use of two stations and better to compare the spatial variations of vTEC. The maximum deviations between the observed and modeled vTEC observed on average during months of Equinox seasons whereas minimum deviation was during Solstice months. The variation of observed vTEC have showed good agreement with the variation of modeled vTEC values in almost all of the days we consider during 2010-2014 period of our observation in all five years. While during high solar activity, the magnitude of modeled vTEC was greater than the magnitude of observed vTEC and during low solar activity, the magnitude of modeled vTEC was less than the magnitude of observed vTEC.*

**DETERMINATION OF MINERALS IN SORGHUM VARIETIES USING  
INDUCTIVELY COUPLED PLASMA OPTICAL EMISION  
SPECTROSCOPYTECHNIQUE IN SOUTH TIGRAY, ETHIOPIA**

**BY: ADANE MAMO**

**MAJOR ADVISOR: YOSEPH ALRESAWUM (PH.D.)**

**CO-ADVISOR: KUSSE GUDESHE (PH.D.)**

**ABSTRACT**

*Sorghum which is resistive to abiotic environmental impacts is grown almost at every part of agro-ecological areas in the world from low land up to high land that reaches from 900m to 3500m altitude. Sorghum is the fifth cereal that is grown in the world after wheat, rice, maize, and barley. This cereal is source of starch, protein, fat, and minerals due to this it is staple grain in areas such as African, Asian, and in some part of American continents' countries. Generally; having this cereal as staple food will be benefited someone relief from celiac disease, diabetes, hypertension, facilitates blood circulation; maintain health of digestion system etc. Objective of this thesis was to determine minerals and their concentrations in sorghum varieties grown at southern zone of Tigray which is the area where sorghum is produced in a great deal and has many varieties of sorghum. The technique used to determine minerals was ICP-OES with dry Ashing extraction method. Concentration of minerals determined using this technique was Ca, K, Mg, Na, P, Fe, Mn, Zn, Cu, Cr, and B with 218.86, 4053.35, 1238.10, 42.38, 2853.68, 62.26, 7.02, 11.01, 0.83, 0.54, 2.68 and 0.27 mgs/Kg respectively.*

**Key Word:** Sorghum, ICP-OES, Dry ashing, minerals, staple food

# A STUDY ON SPATIAL AND TEMPORAL VARIATIONS OF RADIATION BELT PARTICLES OBTAINED FROM VAN ALLEN PROBES

BY: WONDALE MEKONNEN DERAJEW

MAJOR ADVISOR: MELESSEW NIGUSSIE (PHD)

## ABSTRACT

*The spatial and temporal variations of the radiation belt particles have received considerable attention in recent years because of their impact on life in our technology based society and because of the fundamental and unresolved scientific questions about the acceleration and loss of radiation belt particles. Considerable effort has gone in to understanding both the sources of these particles and the physics governing their dynamical behavior. In this thesis, a time profile of electron flux at different L - shells has been studied in detail on the example of 17 March 2013 and 8-9 October 2012 geomagnetic storms. Van Allen Probes data from the RBSP- ECT instrument suite was used. The L-shell plot method has been used. Data for electrons with energies of 2.30 MeV were included and examined as a function of L- shell, energy, and UTC during four storms with  $Dst \leq -50$  nT during 9 October 2012 to 28 May 2017. The radiation belt response revealed clear energy and L- shell dependencies, with tens of keV electrons enhanced at all L- shells ( $2.5 \leq L \leq 6$ ) in all storms during the storm commencement and main phase and then quickly decaying away during the early recovery phase, low hundreds of keV electrons enhanced at lower L- shells ( $\sim 3 \leq L \leq \sim 4$ ) in upward of 90% of all storms and then decaying gradually during the recovery phase, and relativistic electrons throughout the outer belt showing main phase dropouts with subsequent and generally unpredictable levels of replenishment during the recovery phase. Compared to prestorm levels, electrons with energies  $>1$  MeV also revealed a marked increase in likelihood of a depletion at all L- shells through the outer belt ( $3.5 \leq L \leq 6$ ).*

**Key Words:** - Radiation belt, solar Wind, Geomagnetic storm, L- Shell, Particle flux,

# DETERMINATION OF LYCOPENE CONCENTRATION IN TOMATO AT DIFFERENT RIPENING STAGES USING ULTRAVIOLET-VISIBLE (UV-VIS) SPECTROSCOPY IN DAWRO ZONE, SOUTHERN ETHIOPIA

BY: DANA DEDISO DAIMO

MAJOR ADVISOR: KUSSE GUDISHE (PHD)

## ABSTRACT

*The results of this study showed that the lycopene concentration in both investigated tomatoes during fruit ripening significantly increased. Both varieties of tomato contain the appreciable content of lycopene ranged from 14.51543 mg/kg  $\pm$  1.11 to 58.93174 mg/kg  $\pm$  1.47 and the relative error ranged from 0.22 to 4.69. The lowest concentration of lycopene (14.51543 mg/kg  $\pm$  1.11) was recorded in margilopina money- maker stage 2 and the highest concentration of lycopene (58.93174 mg/kg  $\pm$  1.47) was found in roma v-efina Napili- VF stage 6. From the statistical analysis, our result also showed that the per cent relative standard deviation (%RSD) and per cent of relative error of margilopina money-maker tomato samples in theoretical method obtained are 7.65, 1.7; 4.50, 0.33 and 4.21, 0.22 respectively and the per cent relative standard deviation (%RSD) and per cent of relative error of roma –v-efina Napili- VF tomato samples obtained are 8.76, 4.69; 5.05, 0.70 and 2.49, 0.57 respectively. In both tomato varieties, the highest concentrations of lycopene are measured in red or fully ripened stages and only slightly lower concentrations of lycopene are found in the breaker stage which is the significant nutrient for human body in daily life.*

**Key words:** Absorbance, Concentration, Lycopene, Ripening, Tomato, UV-visible Spectroscopy

# **THE STUDY ON VARIATION OF IONOSPHERIC TOTAL ELECTRON CONTENT DUE TO THE SOLAR INDICES OF EXTREME ULTRAVIOLET AND F10.7 cm RADIO FLUX OVER BAHIR DAR ETHIOPIA, DURING THE YEAR 2010-2014**

**BY: YAYEH MEKONNEN ENDALIE**

**MAJOR ADVISOR: TSEGAYE KASSA (PHD)**

## **ABSTRACT**

*Number of total electron content (TEC), recorded from Bahir Dar (11.6° N and 37.36 °E), was analyzed to investigate the combined roles of the solar radio flux (F10.7cm) and the extreme ultra violet (EUV) on TEC variation over Bahir Dar during the ascending phase of solar cycle 24. The data obtained are for a period of five years from low to high solar activity (2010-2014) using GPS (Global Positioning System) receiver. A linear fit was used as a model to describe the daily variation of vTEC in relation to solar parameters. From the daily variation we found that the maximum value of TEC was observed during days which have the maximum intensity of solar indices and it has connection with rotation of the earth around the sun. From the seasonal analysis, it is found that greater values of the GPS-TEC are observed during equinox season when the sun was nearest to the earth relative to other seasons in case the ionization process is higher. The deviation of GPS-TEC was higher in equinox season than that of solstice so there was another factor which can perturb the number of vTEC in equinox season. From the long term observation the variation of GPS-TEC increases from 2010-2014 in the ascending order of minimum solar activity to maximum solar activity period depending on the solar cycle variation of solar indices. From the annual variation observation of GPS-TEC due to the solar indices of EUV flux and F10.7 cm solar radio flux it is concluded that the solar index EUV flux is a better controller of GPS-TEC, compared to F10.7 cm based on a frequency observation and due to the deviation of modeled and observed vTEC.*

**Keywords:** solar activity; TEC; F10.7; EUV; Linearity

**DETERMINATION OF CAFFEINE AND CHLOROGENIC ACIDS  
CONTENTS IN GREEN COFFEE BEANS BY UV/VIS SPECTROSCOPY  
IN KEMBATTA TEMBARO ZONE, SNNPR, ETHIOPIA**

**BY: WUBNESH HADERO ANSHEBO**

**ADVISOR: YOSEPH ALRASEUM (PHD)**

**CO-ADVISOR: KUSE GUDISHE (PHD)**

**ABSTRACT**

*In this research an attempt was made to determine caffeine and CGA contents in coffee beans by using UV/Vis spectrophotometric method. The amount of these compounds in green coffee bean was analyzed by applying one way analysis of variance (ANOVA). In this research, the contents of caffeine and CGA in different coffee beans varieties. Medoye the lowest caffeine content was found  $0.981 \pm 0.037$  and highest  $1.021 \pm 0.029$ . For Derbo lowest  $0.951 \pm 0.033$  and highest  $1.038 \pm 0.04$ . For Argema lowest  $0.940 \pm 0.079$  and highest  $1.069 \pm 0.069$ . Finally Miqe has only one variety which is  $1.075 \pm 0.015$ . From total samples, lowest caffeine content is  $0.940 \pm 0.079\%$  and the highest caffeine content  $1.075 \pm 0.015\%$ . Medoye lowest  $5.813 \pm 0.035$  and highest  $6.421 \pm 0.031$ , for Derbo lowest  $5.907 \pm 0.109$  and highest  $6.417 \pm 0.121$ , for Argema lowest  $5.493 \pm 0.0496$  and highest  $6.214 \pm 0.125$  and since, Miqe has only one variety its value is  $5.614 \pm 0.095$ . Moreover, the contents of chlorogenic acid by the same method in green coffee beans are in the ranges of  $5.493 \pm 0.0496\%$  and  $6.421 \pm 0.031\%$ .*

**Key words:** Caffeine, Chlorogenic acids, Coffee Beans, UV/Vis Spectroscopy

# DETERMINATION OF HEAVY AND TRACE ELEMENTS IN HONEY USING INDUCTIVELY COUPLED PLASMA OPTICAL EMISSION SPECTROSCOPY IN SOUTH EASTERN OF TIGRAY

**BY: GEBREWAHD ABADI**

**MAJOR ADVISOR: YOSEPH ALRESAWUM (PH.D.)**

**CO-ADVISOR: KUSIE GUESHE (PH.D.)**

## ABSTRACT

*The present study was aimed to determine the heavy and trace metals in honey samples from South East Zone of Tigray regional of Ethiopia. Total of four honey samples were collected from four districts of the zone and analyzed for concentration of heavy and trace metals (Fe, Cu, Mn, Zn, Co, Cd, Pb, As, and Hg) by inductively coupled plasma optical emission spectrometry (ICP-OES) method. The samples were digested following the optimum digestion condition by applying the reagents 30ml HNO<sub>3</sub> and 30ml H<sub>2</sub>O<sub>2</sub>, the temperature at 270 oc for 3 hours. The digestion method was found to be effective for all metals in this study. It was validated through recovery analysis showing a good percentage recovery range (86.83-119.7%). The average levels of the metals were found in the range of 5.32-28.6 mg/kg for Fe, 0.24-0.749mg/kg for Cu, 0.627-4.401mg/kg Zn, 0.41-3.15mg/kg for Mn, 0.08-0.112 mg/kg for Co, 0.25-0.325mg/kg for Pb, 0.24-0.46mg/kg for As, 0.031mg/kg for Hg and 0.02-0.03mg/kg for Cd. This study confirmed that the honey is good sources of essential metals (Fe, Cu, Mn, Co and Zn). Moreover the findings of the study indicated that the maximum concentration of the essential metals (Fe, Cu, Mn, Co, and Zn) and the minimum concentration of the non-essential heavy metals (Pb, Cd, As, and Cd) were obtained in sample from Hintalo Wajrat district. Additionally the maximum concentration of the toxic metals Pb and Hg were detected in a sample from degua temben, and Cd as well as As in a honey from Enderta.*

**Keywords:** Honey, Essential metals, Non-essential metals, Spectroscopy, ICP-OES.

**DETERMINATION OF TRACE AND HEAVY ELEMENTS IN MORINGA  
STENOPETALA LEAVES AND FLOWERS USING INDUCTIVELY COUPLED  
PLASMA-OPTICAL EMISSION SPECTROSCOPY (ICP-OES) IN DAWURO ZONE,  
SOUTHERN ETHIOPIA**

**BY: SOLOMON RAGASA ABASHU**

**MAJOR ADVISOR: KUSSE GUDISHE (PhD)**

**ABSTRACT**

*The study aimed at determining the trace and heavy elements present in leaves and flowers of Moringa stenopetala. In this study, the trace and heavy elements in Moringa stenopetala leaves and flowers were evaluated by using radial inductively coupled plasma optical emission spectroscopy by dry ash digestion method. The average mean concentration of the analytes in Moringa Stenopetala leave samples from (minimum - maximum in mg/kg) are: Ca (5,713.86 – 6,621.14), K (27,587.1 - 28,315.4), Pd (0.7257 - 0.809), Zn (41.166 - 47.003), Cd (0.052 - 0.825), Cu (2.411- 4.735), Ni (0.544 - 0.7963), Mn (26.75 - 26.92), Fe (61.049 - 65.296) and the average mean concentration of the analytes in Moringa stenopetala flower samples from (minimum - maximum in mg/kg) are also as follows: Ca (2,796.97-3,028.67),K (28,358.30 - 36,008.60), Pb (0.5363 - 0.6787), Zn (24.482 - 30.658), Cd (ND - 0.0253), Cu (1.829 - 4.689), Ni (0.5270- 0.612), Mn (12.37- 14.52) and Fe (108.97 - 114.027).In addition, the results showed that the levels of elements K and Fe are higher in the leaves than flowers. The Statistical Analysis of Software (SAS) showed that the LSD and CV value for Ca, K , Pb, Zn, Cd, Cu, Ni ,Mn, Fe are 99.198, 443.42, 0.23, 3.38, 0.013,0.31, 0.12,1.87, 7.28and 1.16, 0.78,17.79, 5.02, 22.32, 4.84, 10.18, 4.93, 4.47 respectively. The levels of most elements analyzed in Moringa Stenopetala leaves and flowers samples of this study are compared well with those reported for different medicinal plants from some other parts of the world and standards set by FAO/WHO. Hence, they are safe for human consumption and can be considered as a good source of essential nutrients.*

**Key words:**Concentration, Dry ash, Heavy element, ICP-OES, Moringa stenopetala, Permissible limit, Trace element

**DETERMINATION OF HEAVY AND ESSENTIAL ELEMENTS IN TAP WATER  
USING INDUCTIVELY COUPLED PLASMA OPTICAL EMISSION SPECTROSCOPY  
(ICP\_OES) IN KEMBATA TEMBARO ZONE, SOUTHERN ETHIOPIA**

**BY: TEKALEGN MATHEWOS WABETO**

**MAJOR ADVISOR: KUSSE GUDISHE (PHD)**

**ABSTRACT**

*In this study, the levels of five essential metals (Na, K, Ca, Mg, Zn, and three heavy metals (Pb, Hg and Cd) were determined in the tap water by using Inductively coupled plasma-optical emission spectrometry (ICP-OES) technique after pre-concentration and acid digestion. The results obtained revealed that the concentrations of metals in the tap water samples in mg/l are in the range of: Ca (16.52-24.74), K (8.43-11.44), Mg (5.10-11.30), Na (18.89-28.62), Pb (0.02-0.03), Zn (1.22-2.44), Cd (0.01) and Hg ( 0.04-0.05). The results showed that the concentrations of calcium, sodium, potassium zinc, and magnesium were very small and the difference was statistically significant at  $p < 0.05$  as compared to their recommended value by USEPA/WHO. While, the concentration of Hg, Cd and Pb are above the maximum level those recommended by EPA, WHO and USEPA according to the samples source. The concentrations of Ca, Na, K, Mg and Zn in the tap water samples are below the maximum level. The recovery percent was found to be 90.26 -110.99%.The method was validated in terms of accuracy, precision, limit of detection (LOD) and limit of quantification (LOQ) and confirmation reliability.*

Key words: heavy metals, essential metals, tap water, ICPOES

# ISOLATION OF COMPOUNDS FROM *MORINGA STENOPETALA* ROOT BY USING INFRARED AND NUCLEAR MAGNETIC RESONANCE SPECTROMETERS

By: ASNAKE HAILU ALEMU

ADVISOR: KUSSE GUDISHE (PhD)

## ABSTARCT

*This study was conducted to isolate compounds from Moringa stenopetala root for medicine purpose. The root of moringa stenopetala was extracted with different solvent system: n-hexane, dichloromethane/methanol (1:1) and methanol using maceration technique. The phytochemical analysis confirmed the presence of alkaloids, saponins, flavonoids, phenols, steroids, glycosides, terpenoids and tannins. Crude extract of dichloromethane/methanol (1:1) was selected depending on an excellent TLC profile isolation of pure compounds than the other two crudes. Three different compounds were isolated and the compounds were characterized using spectroscopic techniques (IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and DEPT-135). The results signify that the isolated and characterized of two compounds were (5E, 7Z, 10E)- 4,5,6,7- tetramethylnonadeca-5,7,10-trienoic acid and (4E,6E,8E)-pentadeca-4,6,8-trienoic acid structure nearly look like simple fatty acid. The spectroscopic (IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and DEPT-135) data of third compound was insufficient for full characterization because of divergent spectroscopic data arose between IR and <sup>1</sup>H-NMR, so it was partially characterized.*

**Key words:** Crude extract, *Moringa stenopetala*, IR, NMR.

# **DETERMINATION OF FAT AND PROTEIN CONCENTRATION OF MILK USING ULTRAVIOLET-VISIBLE SPECTROSCOPY: THE CASE IN EAST GOJJAM, AMHARA REGION OF ETHIOPIA'**

**BY:WONDEMU YIHUNIE KASSA**

**MAJOR ADVISOR: YOSEPHALRESAWUM (PHD)**

**CO-ADVISOR:KUSSE GUDISHE (PHD)**

## **ABSTRACT**

*This research work was initiated with the objectives to enhance the accuracy of determining the intended Components within the selected milk samples like the amount of fat and protein concentration and to use ultraviolet visible spectroscopy method for the determination of the concentration of fat and protein in the milk samples. Based on the absorption theory and Lambert-Beer law, the ratio between the final and the initial intensities of light is called the transmittance, was taken on as the optical parameter determining the fat and protein concentration in the milk sample. The LOD, LOQ, precision, recovery, linearity and the working range validation method were utilized. The amounts of fat and protein concentration of three animals (Cow, Hybrid Cow and Goat) milk samples were found to be 337ppm (3.37±0.03) %, 284ppm (2.84±0.015) % and 348ppm (3.48±0.015) % respectively. On other hand, the amount of protein concentration in each (Cow, Hybrid Cow and Goat) milk samples was found to be 318 ppm (3.18±0.02) %, 279 ppm (2.79±0.012) % and 329ppm (3.29±0.021) % respectively. ANOVA software also used to compare and contrast the obtained data.*

**Key word:** Ultraviolet visible spectroscopy, Cow, hybrid cow and goat, Protein, Fat, Calibration curve.

# **SPATIAL AND TEMPORAL VARIATIONS OF THERMOSPHERIC WIND SPEED OBTAINED FROM TIDI SATELLITE**

**BY: YAREGAL ZEWDIE BEKELE**

**MAJOR ADVISOR: MELESSEW NIGUSSIE (PHD)**

## **ABSTRACT**

*Our motivation of study in MLTI regions on determining the spatial and temporal variations of thermospheric winds from data obtained on TIDI satellite were by the following main reasons: (1), To Understand spatial and temporal variations of meridonal and zonal thermospheric wind speed in the Mesosphere-Lower-thermosphere-ionosphere (MLTI) region. (2), In MLTI regions, probably the latest and updated researches are not found when we compare it with other regions. (3) Why we use data obtained from TIDI satellite is that, TIDI can search wind data during day and night times continuously. But, most of the other fabry-perot interferometers and ground based GPS can show fluctuations during night time and storm time conditions. TIDI winds (zonal and meridonal components) at an altitude of 105km are analyzed. First, the samplings from the TIDI satellite are linearly ordered at spaced track angle grid points. Then the daily, monthly, seasonal and annual mean meridonal and zonal winds are calculated and plotted at these evenly spaced track angle grid points within the selected year (2013). West to east and east to west flow of zonal winds are seen in winter and summer seasons respectively. This is due to the deflecting action of Coriolis force that steers motion of air to the right in northern hemisphere and to the left in southern hemisphere. Gap of valid data appeared at some latitudes were difficult to interpret and give reliable formation on the thesis of study. Hence, in the future, one can increase the reliability of the study by considering consequences of vertical winds on his/her methodology that can affect direction and magnitude of horizontal winds or create data gaps through the observation.*

**Key Words:** TIDI, Meridonal Wind, Zonal Wind, Ionosphere, Coriolis force, MLTI

# DETERMINATION OF CATHINONE AND CATHINE CONCENTRATION IN CHAT (KHAT) USING ULTRA VIOLET VISIBLE SPECTROSCOPY

BY: YAYEH MOSSIE NEGA

ADVISOR: KUSSE GUDISHE (PHD)

## ABSTRACT

*This research aimed to determine the concentration of cathine and cathinone in chat leaf using UV Vis spectroscopy. The samples were collected from the three main khat growing regions in West Gojjam Zone, Amhara region namely Zenzelima, Meshenti and Merawi woreda. Jenway 6705 UV vis spectroscopy was used to measure the absorbance versus wave length of the blank solutions to determine the limit of detection and limit of quantification, the spiked solution to calculate the recovery test and the sample. A calibration curve were prepare to calculate the concentration of cathine and cathinone using Beer Lambert law or linear calibration curve equation. The limit of detection (LOD) and limit of quantification (LOQ) for cathine (0.42, 1.4) and cathinone (0.26, 0.86) is respectively. The linear calibration equation and its correlation coefficient ( $R^2=0.9987$ ) for cathine and ( $R^2=0.9974$ ) for cathinone. The concentration of cathine in the range between 99.2-131 mg/100g and cathinone in the range between 13.7-46mg/100g. The data analysis was also carried out by using one way ANOVA statistical software. Thus, the result showed that there was a significance difference between the group (Merawi, Meshenti and Zenzelima) at  $p<0.05$ .*

Keywords: Khat (chat); cathine; cathinone; UV Vis spectroscopy

# **CHARACTERISTICS OF IONOSPHERIC SCINTILLATION OVER BAHIR DAR USING GPS-SCINDA RECEIVER IN THE YEAR 2008-2016**

**BY: YESHIWAS BAYIH**

**ADVISOR: TSEGAYE KASSA(PHD)**

## **ABSTRACT**

*Scintillation occurs when a radio signal propagating from SCINDA GPS satellite to receivers through the ionosphere encounters fluctuation in electron density. In the present study, we have investigated the characterization of ionospheric scintillation over Bahir Dar in the year 2008-2016 G.C. The aim of these investigation is to understand the characteristics of ionospheric scintillation over Bahir Dar using VTEC and S4 index. The data used in this study were taken from a dual frequency SCINDA-GPS receiver in Bahir Dar at the GPS location of 11<sup>o</sup>30 N, 37<sup>o</sup>30 E. In this region, it is suitable to measure VTEC and S4. This motivates us for the study of characteristics of ionospheric scintillation. The result showed mostly maximum scintillation occurred during post sunset and before the sun rise and minimum scintillation on the day time and highly VTEC occurred in a day around 10-15 UT throughout 9 years. The correlation between VTEC depletion and S4 have been investigated on April 2010 and seasonally on March equinox in 2012. In this investigation, the results were indicate VTEC depletion when there is intense scintillation.*

Key word: GPS-SCINDA, Scintillation, Total electron content (TEC), S<sub>4</sub>, VTEC

**DETERMINATION OF BIOACTIVE COMPOUNDS IN *ACMELLA CAULIRHIZA*  
FLOWER USING FOURIER TRANSFORM INFERARED SPECTROSCOPY**

**BY: TEMESGEN CHIMDESA MULETA**

**ADVISOR: KUSSE GUDISHE (Ph.D.)**

**ABSTRACT**

*Traditional medicines have been used in health maintenance, disease prevention and treatment. For example *Acmella caulirhiza* used to treat a child's sore of mouth/tonsillitis traditionally in wolaita people, Southern Ethiopia. The main and specific objectives of the present study were to determine bioactive compounds of *Acmella caulirhiza* flower, indicate its functional group by using FTIR spectroscopy and bioactive compound antibacterial activities. The study area was Boloso sore district Wolaita zone, southern Ethiopia where thus plant specimens were collected. The flower heads were dried in shaded region, ground into a powder and extracted with methanol. The plant extracts were tested for Phytochemical investigation, activity against gram positive (*Staphylococcus aurous*) and a gram negative (*Pseudomonas aeruginosa*) and to determine functional group of *A. caulirhiza* flower extract. phytochemical examinations revealed that *Acmella caulirhiza* flower extract contains glycosides, saponins, flavonoid, terpenoid, coumarins, steroids and sterols compounds and good antibacterial activity against gram positive (*Staphylococcus aurous*) and gram negative (*Pseudomonas aeruginosa*) bacteria due to the presence of alcohol, alkane, alkenes, alkyne and aromatic compounds functional groups.*

**Keywords:** *Acmella caulirhiza*, Bioactive compounds, Extraction, FTIR, and functional group

**LONGITUDINAL AND SEASONAL VARIABILITY OF HALL AND  
PEDERSEN CONDUCTIVITY IN THE E - AND F-LAYER USING 2013  
WORLD DATA CENTER**

**BY: TESFAYE GASHAYE MAZENGA**

**ADVISOR: MELESSEW NIGUSSIE (PHD)**

**ABSTRACT**

*This thesis was aimed at investigated the variation of the Hall and Pedersen conductivity seasonally and longitudinally on the ionospheric layer. There was ionospheric irregularity on the ionosphere. One of the ionospheric irregularities is ionospheric conductivity. We have done the research by using MATLAB (Matrix Laboratory) program language. We have obtained the global distribution of the electric conductivity in the ionosphere basically in the F-layer and E-layer by using global ionospheric conductivity based on the International Reference Ionosphere (IRI) model. The derivation of the Hall and Pedersen conductivity has been included. It showed that at noon time (UT=9hr) the Pedersen conductivity of the F-region during September equinox is larger than that of the E-region of all season. The result showed that during June solstice, the F-region Hall and Pedersen conductivities were minimum between 50°W and 150°W. Thus the minimum and the maximum values of the Hall and Pedersen conductivities in the E-layer and F-layer showed us that they are seasonal and longitudinal dependence.*

**DETERMINATIONS OF HYDROXY METHYL FURFURAL CONCENTRATION IN  
HONEY USING ULTRA VIOLET VISIBLE SPECTROMETERY**

**BY: TEZERA ALEHEGN**

**ADVISOR: KUSSE GUDISHE (PHD)**

**ABSTRACT**

*This research aimed to determine the concentration of hydroxyl methyl furfural (HMF) using UV-visible spectroscopy to assess the quality of honey. The honey samples were collected from three honeys productive Kebeles (Anjenie, Yemehel, and Enewond) of Dembecha Woreda in West Gojjam Zone, Amhara Reginal State. Following the procedure of white method, the concentration of HMF of Anjenie, Yemehel, and Enewond Kebeles' honey were  $11.18 \pm 0.052$  mg/kg,  $24.95 \pm 0.119$  mg/kg, and  $56.94 \pm 0.366$  mg/kg respectively. All the samples were found to have HMF value less than the maximum concentration of HMF in honey by standard controlling international organizations. Thus, the results were shown that the samples had good quality. Also one way ANOVA showed that there is statistically significance differences between the groups in HMF concentration at 95% confidence level ( $p < 0.05$ ).*

Key Words: Hydroxyl methyl furfural, concentration, quality, honey.

### **3.4. Department of Sport Sciences**

# **THE CHALLENGES AND PROSPECTS IN THE DEVELOPMENT OF VOLLEYBALL SPORT: IN THE CASE OF HADIYA ZONE**

**BY: HAILE ESTIFANOS**

**ADVISOR: AFEWORK ASALE (ASSISTANCE PRO.)**

## **ABSTRACT**

*Volley ball is one of the most popular games in the world. This game is also popular in our country. The study was designed to investigate factors that affect the development challenges and prospects of volleyball sport in Hadiya zonal. To this effect, the researcher used the descriptive survey method which is strongly believed to be the most appropriate for addressing the intended purpose of this study. The research populations included volleyball coaches, sport administrator, volleyball players and physical education teachers. Total population were coaches, 32 volleyball players, 9 sports office administrative, 4 physical education teachers' respondents were select from the study site with simple random sampling. Four instruments such as questionnaire, interview, observation and document analysis were used to gather the data. The descriptive analysis of the data was analyzed by using both qualitative and quantitative methods, such as frequency counts, percentage, mean, standard deviation and descriptive statements. The major finding of the study clearly showed that absence of supporters association, lack of facilities and equipment, lack or absence of play ground in the environments, most volleyball projects do not have organized supporters, no effort was made by the federation for project players to have a chance to get involved in different volleyball clubs after completing their training, not following scientific method of training by coaches and very low level of communication among stakeholders. To overcome these problems, the following recommendations have been forwarded: every stakeholder should work hand to hand in order to solve the problems, the government should give equal emphasis to volleyball sport like other sports and the federal sport commission should construct volleyball courts in different corners of the city so as to increase its popularity.*

**Key words:** - volleyball, development, factors, training, and challenges.

# **THE IMPACTS OF COACHES AND PLAYERS RELATIONSHIP ON VOLLEYBALL SPORT PERFORMANCE: THE CASE OF HADIYA ZONE VOLLEYBALL PROJECT, SNNPR, ETHIOPIA**

**BY: MARTA ABERA**

**ADVISOR: MILKYASBASSA (PH.D.) ASSOCIATE PROFESSOR**

## **ABSTRACT**

*The purpose of this study was to examine the impacts of coaches and players relationship on volleyball performance: the case of hadiya zone volleyball project. In this study, the researcher selected descriptive method of research and both qualitative and quantitative approaches of the data. This study used both primary and secondary sources of data. In this study, there are two training centers namely Hossana city administration and Anlemo woreda. The target population of the selected training centers was 43. These include 2 coaches, 1 manager and 40 players. The sample size of the study was 23 items of which 20 players, 2 coaches and 1 manager out of 43 target population. The quantitative data were entered in to the statistical package for social science (SPSS), Version 20. Coaches of professional sports teams are often credited or blamed for the success or failure of their teams. The answer received from investigation of the center was tabulated and interpreted by taking descriptive statistics results by Frequency and percentage. A key finding related to there was both positive and negative impacts of coaches and players relationship on volleyball sport performance in Hadiya zone volleyball project. The majority of players responded that there is a mutual respect and freely communication between the players. Players had united in trying to reach its goals for performance. There was a mutual respect among player. Most of players said the coach encourages the players to enhance confidence at him. They could not be satisfied by the supply of volleyball facilities such as sport wear, transport, medical, financial support to the team by the center. The project center should providing sufficient volleyball facilities and equipment's, giving motivation like incentives and bonuses be all aspects of positive relationships and facilitated player performance, in order to improve the players' performance success. Players, coaches, managers and office experts should work cooperatively. Zone administration should be expected to motivate the project by giving salary. The Hadiya zone volleyball project should providing sufficient facilities, in order to improve the players' performance success. Stakeholders should prepared sufficient budget, for rewarded and different incentives so as to appreciate the team. The coaches should have an open communication and mutual respect, in order to improve the relationship on volleyball project performance. Team manager should have good communication in meeting with the players as well as parents in order to create smooth relationship among them.*

**Key -words**Coach, Players, Project, Performance, Relationship

# **CHALLENGES OF FEMALES' VOLLEYBALL PROJECT ORGANIZATION IN TWO SELECTED ZONES OF SNNPR, ETHIOPIA**

**BY: DEGINESH HELANA**

**ADVISOR: BELAYNEH T. (ASS PROF.)**

## **ABSTRACT**

*The purpose of this study was to identify the challenges of female's volley ball project in Wolaita and Hadiya Zones of SNNPR. The subjects in this study were 143(100%) players; 14(100%) coaches of the projects,7(100%) project managers, and 20(100%) office experts respectively. As a methods of data gathering tools; questionnaire, interview, and document analysis were employed. To analysis the collected data, both qualitative and quantitative methods such as descriptive statements and frequency counts, percentage, means, were on use respectively. To this end, the following major findings were observed from the study. Almost all of the participants reported that they do not have legal issues which supports the project organization, do not have enough salary and incentives, shortage of sport facilities which helps trainees to promote to premier league ,lack of players, managers, office experts and coaches cohesiveness and working cooperatively habit, there is back ward attitude in the society on female's sport participation, there is lack of budgets and poor way fund rising from supporters, society and government, there is shortage of sport materials and playing ground, current educational system negatively affects females to participate in different sport activities in the school also this decreases interest of participants and there is low extension service from colleges and universities near to the community in project support and inclusiveness. According to the players respond and in my observation the quality of the playing field is low, the players and coaches are not satisfied. If it has improved by concerned bodies should be highly recommended. In addition to these, the result of the study also revealed the coaches' opportunity of getting performance enhancing (training) courses from the Volleyball Federation is very low. The concerned bodies should jointly work to provide trainings for coaches and sport experts, and they should support coaches related with how to administer the tasks in organized coaching environment.*

Key words: coach, project, performance, materials

**PRACTICE AND CHALLENGES OF VOLLEYBALL COACHING  
LEADERSHIP STYLES: THE CASE OF SOUTH NATIONS AND  
NATIONALITY HADIYAZONE DUNA AND SORO WOREDA,  
ETHIOPIA**

**BY: MATHEWOS ANEBO**

**ADVISOR: MILKYASBASSA (PH.D.) ASSOCIATE PROFESSOR**

**ABSTRACT**

*The study was designed to investigate the practice and challenges of volleyball coaching leadership styles in case of Hadiya zone, Duna and SoroWoreda. To this effect, the researcher used the descriptive survey method which is strongly believed to be the most appropriate for addressing the intended goal of this study. The research population included a range of respondents namely volleyball coaches, sport administrator, volleyball players and physical education teachers. Total population numbers of coaches were four with purposive sampling, 27 volleyball players, 6 sports office administrative, 4 physical education teachers' respondents were selected from all the sample of the study site with availability and purposive sampling. researcher used four instruments such as questionnaire, interview, observation and document analysis were used to gather the data. The descriptive analysis of the data was analyzed by using both qualitative and quantitative methods, such as frequency counts, percentage, mean, standard deviation and descriptive statements. The findings of the study indicated that, their coaches are democratic in some cases. But the coaches also have short comings in few cases while applying democratic behavior, the finding indicates that it is not free from autocratic leadership behavior. Have a good experience in applying training and instruction coaching leadership style, understanding level of the player, individual difference, educational levels of the players and soon. These were the most difficulties that faced to coaches to apply the best coaching leadership style to enhance the achievement of player's and Finally the finding of this study is indicating that preferred coaching leadership styles have a direct relationship with players', achievements, performance, skills and techniques and tactic developments. At the end some recommendations were made for the preferred coaching leadership style should fit to the situation. Excellent coaches often switch instinctively between styles, according to the players behavior and the task that needs to be done to observed problems of the coaching leadership style.*

**Key words:** Achievement, coaching, volleyball, leadership, sport

**ASSESSMENT OF PLAYGROUND, SPORT WEARS AND THEIR  
IMPACT ON PERFORMANCES OF VOLLEYBALL PROJECTPLAYERS  
IN WOLAITA ZONE SPORT ADMINISTRATIVE BODY  
CONTRIBUTION TO THE GROWTH OF VOLLEYBALL IN HADIYA  
ZONE SNNPR**

**BY: LUKAS BAFA**

**ADVISOR: BELAYNEHTSEGAYE (ASSISTANT PROFESSOR)**

**ABSTRACT**

*Environmental factors play important role in the health of athletes and their ability to function. Necessary conditions were provided to maintain the health of athletes so are identified the factors that reduce the ability and athletic performance and presentation appropriate solutions to be adopted to deal with it. The aim of this review was to provide a brief perspective on comfort and performance challenges in protective and sport clothing. Protective clothing (PC) was needed in work or sport to protect against physical hazards, impact, abrasion, and against toxic hazards. Protective and sport clothing may also be used to enhance performance. Protective and sport clothing provide vital functions but also add to physiological loads that could contribute to a progressive decline in physical and mental capacity. To meet the objectives of the study, both quantitative and qualitative research approach were used. In this study, both secondary and primary data were employed. The survey data were collected simple random sampling technique method employed and the data gathered through the questionnaire were analyzed by descriptive statistics method. Whereas the data from interview was analyzed through qualitative technique and the researcher to triangulate by using observation. Accordingly the research revealed that training facilities and equipments were not in the expected level for the trainees and coaches, insouciant a predetermined coaching style evidenced in the projects, lack of playground performance, trainer selection, availability of required training facilities and equipments, lack of proper follow-up and coach's knowledge have been considered as factors affecting the effectiveness playground, sport wear and their impact in volleyball project on the study area. . Finally, the researcher has forwarded recommendation based on the findings.*

**Key words;** -Playground, Sport Wears Performance, Qualitative, Technique, Equipment

# **CHALLENGES AND PROSPECTS OF FOOTBALL DEVELOPMENT WITH SPECIFIC REFERENCES TO SOME SELECTED SOUTHERN REGION UNDER 20 MALE FOOTBALL CLUB PROJECTS**

**BY: TIBEBU SOLOMON CHINASHO**

**ADVISOR: MILKYAS BASSA(PH.D.)ASSOCIATE PROFESSOR**

## **ABSTRACT**

*The purpose of this study was to assess the challenges and prospects of football development in with specific references to some selected Southern nations, nationalities and peoples' region under-20 football projects. Both qualitative and quantitative approaches particularly a descriptive survey were employed as they were found to be appropriate for answering the basic research questions. Pertaining to the sample size of population for the study (N=75) trainees (N=6) coaches were participated. Concerning instruments of data gathering questionnaire, interview and observation were be triangulated to enrich the validity of the tools. Descriptive (frequency distribution and percentage) method of data analysis has been utilized to analyze the data for questioners. Whereas the data gathered through interview and observation were analyzed through descriptive statements. A descriptive survey research design was employed as a general approach in the study. The findings of the study indicated that, following major problems are dominant in Southern nations, nationalities and peoples' region under-20 projects lack of cooperation among the concerned stakeholders, absence of long term and permanent fund for the football projects, inadequate facilities and equipment for training, lack of properly designed scientific selection criterion of trainees to join the projects, lack of diet and dieting program in the projects, lack professionals to assist the coach when trainees were injured. As a general solution to the identified problems greater emphasis has to be given to the youth football project in the area so that it could be possible to recruit future elite players in the near future.*

**Key words:** challenges and prospects, football development, stakeholder

# **CHALLENGES AND PRACTICING OF CULTURAL GAME INTWO SELECTED ZONES OF SOUTH REGIONAL STATES OF ETHIOPIA**

**BY:MERKEBASALE**

**MAJOR ADVISOR: BELAYNEHTSEGAYE(ASSISTANT PROFESSOR)**

**AND: MILKYASBASSA, (PH.D.) ASSOCIATE PROFESSOR**

## **ABSTRACT**

*The study aimed to assess the challenges and practice of cultural games in two selected zones of SNNPR, Ethiopia. It also examined the challenges and practice of cultural games in two selected zones of SNNPR, Ethiopia. The study was conducted in wolaita and daworo zones. For this study, descriptive study design was implemented. The source of the population was 6000 from Daworo and Wolaita culture, tourism and sport office and children, youth and women office. In addition, 40 elder and experienced individuals were incorporated in the study population. The sources of the study were both primary and secondary data source. Data gathering tools like questionnaire, interviews and observation were used. Both close and open ended questionnaire were provided.purposive sampling techniques was employed and 120 (60 female) and (60 male) participants were included as a sample from wolaita and daworo zones. The data were analyzed by using SPSS version 20 with statistical tools including descriptive statics and bar graphs. Therresult of the study indicates that there are different challenges of cultural games. These are low attitude, low interest and low attention which is given to the games, the concerned bodies have not been followed it as the other sports. And also the youth was dominated by the modern ball games. Absence of training to players and coaches, lack of materials, equipment's and playing fields, as well as absence of competitions at different age level are also the major challenges of cultural games. Therefore, the institution of cultural games, federation, the SNNPR, and the wolaita and Dawuro zones of culture, truism and sport office are a great responsibility to renew the structure and to progress cultural games in the country and there should be a great measurement on this problem.*

**Key words:** Challenges, Practice, and cultural game.

**CHALLENGES OF PHYSICAL EDUCATION TEACHERS IN  
PRACTICAL SESSIONS IN THE CASE OF SOME SELECTED  
PREPARATORY SCHOOL OF NORTH SHEWA ZONE  
AMHARA REGION, ETHIOPIA**

**BY: DAMTEW YITNA  
MAJOR ADVISOR: MENGISTU GALCHO (ASSIST.PROF)  
CO-ADVISOR: MILKIAS BASSA (PHD)**

**ABSTRACT**

*The purpose of this study was to assess the main faces and challenges of physical education teachers and suggests potential solutions to the challenges in North shewa zone preparatory school. To do so, samples of 71 individuals were selected from the existing 132 population of the study in which 43 physical education teachers, 14 main schools principal and 14 vice principal school administrative bodies were included. The data was collected through questionnaire, interview and observation check lists. The data collected through questionnaire was organized in the form of tables. The organized data was presented and analyzed quantitatively by the methods of descriptive statistics such as frequency and percentage. The sampling technique employed on this paper was purposive sampling techniques methods to be used. Purposive sampling techniques were employed to select 28 vice and main principal school administrative and 43 physical education teachers in preparatory school. To get important information about study that selected Physical education teachers and school administrative are selected from each woreda by using purposive sampling technique. Major findings of the study were: there is inadequate facilities and equipments, sport wear, playing field, training fields. The study found that the main challenge which faces physical education teachers during practical session is related with school administrator. Woreda sport offices and school administrative to be given appropriate attention and high emphasis to fulfill school facilities, equipments, sport wear and training areas.*

**Key word:-**Physical Education, Challenges, Facilities, Equipment.

**COMPARATIVE STUDY ON HEALTH RELATED PHYSICAL FITNESS  
IN RURAL AND URBAN PREPARATORY SCHOOL FEMALE  
STUDENTS:THE CASE OF SELECTED WOLAITA ZONE**

**BY: ALTAYE ASHANGO**

**MAJOR ADVISOR: MILKYAS BASSA (PH.D.) ASSOCIATE PROFESSOR**

**CO-ADVISOR: MENGISTU GALCHA (ASSISTANT PROFESSOR)**

**ABSTRACT**

*The main purpose of the present study of this thesis was to compare the level of health related physical fitness of preparatory school female students between rural and urban area at Gulgula and Sodo preparatory schools in Wolaita zone. The total number of population of the study was 150. From rural Gulgula preparatory school 55, and from urban Sodo preparatory school 95. The researcher selected 20 female students from Gulgula total population of 55 female students and 20 female from 95 Sodo preparatory school female students by using simple random sampling technique. The total sample size selected for the study was 40 female students 20 each from two schools. The data was collected by experimental method that tests five health related components of physical fitness such as cardiovascular endurance (12 minutes run (cooper) test, muscular endurance (push-up) test, muscular strength (wall sit) test, flexibility (sit and reach) test and body composition (body mass index) test. The data were analyzed and compared the help of statistical procedures in which mean, standard deviation and standard error of mean test were employed. The result was in cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition rural preparatory school female students were significantly different than their urban preparatory school female students and superior to their urban preparatory school female students.*

**Key words:** health related physical fitness, rural female students, and urban female students

# **PERCEPTION ON THE ROLES OF PHYSICAL ACTIVITY ON ACADEMIC ACHIEVEMENT IN SOME SELECTED PREPARATORY SCHOOLS COMMUNITY OF NORTH SHOA, AMHARA REGION**

**BY: BELAYNEH DEMEKE**

**MAJOR ADVISOR: MILKIYAS BASSA (PH.D) ASSOCIATE PROFESSOR**

**CO-ADVISOR: MENGISTU GALCHO (ASSI. PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to investigate the perception of school community on the roles of physical activity on academic achievement in some selected preparatory schools of North Shoa, Amhara Region. For this, the sample of the subject consists of two hundred ten students who were selected by systematic sampling method, forty four teachers selected by lottery sampling method and two principals were selected by purposive sampling method and totally two hundred fifty six participants were included. To conduct a research both quantitative and qualitative method were employed followed by descriptive study. For this purpose, a variable data suggest the perception of the school community has had a significance impact on the quality of academic achievement in some selected preparatory schools community of North Shoa. Questionnaire and interview were used to collect the data pertains. In order to interpret the data collected, percentages were used as the main method of analysis for quantitative data and descriptive analysis were used for qualitative data. The major findings of the study showed that majority of the respondents stated that: physical activity has a role for academic achievement of students' by the following ways: Physical activities increases neural and behavioral concomitants associated with the allocation of attention to a specific cognitive task, has both immediate and long-term benefits. Overtime as students' engage in developmentally appropriate physical activity improve physical fitness can have additional positive effects on attention, concentration, on-task behavior and these leads to have better academic achievement in different subject areas.*

**Key words:** Awareness, Perception, Achievement, Community

**THE EFFECT OF INTERVAL TRAINING AND CIRCUIT TRAINING ON SOME  
SELECTED PHYSICAL FITNESS PERFORMANCE OF YOUTH FOOTBALL  
PROJECT IN THE CASE OF GIDAMI TOWN, KELEM WOLLEGA, OROMIA  
REGION**

**BY:DANIEL MITIKU**

**MAJOR ADVISOR: MENGISTU GALCHO (ASS. PROF)**

**CO-ADVISOR: AFEWORK ASALE (ASS. PROF)**

**ABSTRACT**

*The purpose of this study was to investigate the effect of interval training and circuit training on some selected physical fitness performance of youth football project In The Case Of Gidami Town, Kelem Wollega, Oromia Region. The study employed Experimental research design. 33 male students with the age of (EG1=15.6364 EG2 = 15.5455 and CG3= 15.8182 had divided randomly into 3 equal groups which was group one circuit training (N = 11) and group two interval training (N= 11) and group three control group (N = 11) and purposive sampling technique are applied to select Gidami youth male football project. Treatment groups 1& 2 received special training for twelve weeks and group 3 (control group) did not treatment received. The Selected physical fitness variables were muscular endurance (sit-ups/60 seconds), power (vertical jump), flexibility (sit and rich test), speed (30 meter dash) and agility (Illinois). Pre and Posttest measurements are taken from the three groups before & after the experimental period of twelve weeks, which was performed three times per week. The data collected from the study subject were analyzed using SPSS version 20 software by paired t-test and ANOVA with level of significant at 0.05. Result indicated that the circuit training and interval training had significantly improved in selected physical fitness variables of muscular endurance, power, flexibility, speed and agility, but circuit training has better improvement on muscular endurance than interval and control groups. There was no significant difference on control group at all level. The result concluded as both circuit and interval training methods shows a better improvement on selected physical and physiological variables due to twelve weeks training program of Gidami youth football players and the researcher recommend that physical education teachers, fitness trainers and football coaches should incorporate circuit and interval training methods for performance enhancement.*

Keyword: Circuit training, Interval training, Physical fitness

**CHALLENGES HINDERING THE PARTICIPATION OF DISABLED STUDENTS IN  
PHYSICAL EDUCATION IN PRACTICAL CLASSES: THE CASE OF SOME  
SELECTED PREPARATORY SCHOOLS IN WOLAITA ZONE.**

**By: GELAN GARIFO MENA**

**MAJOR ADVISOR: MENGISTU GELCHU (ASS. PROFESSOR)**

**CO-ADVISOR: DEBREWOK TESFAYE (ASS. PROFESSOR)**

**ABSTRACT**

*The main objective of the research was to examine problems facing students with physical disabilities in some selected preparatory schools in Wolaita zone. Its specific objectives included; (1) To distinguish the challenges hindering the participation of disabled students in physical education, (2) To find out the efforts done by PE teachers, school principals and concerned bodies to make effective participation of disabled students in physical education, (3) To search out school environment factors that hinder disabled students participation in physical education. The study employed quantitative and qualitative research methods in collecting and analyzing data. Documentary review was used to examine infrastructure situations in 9 preparatory schools. Questionnaires and observation were also used to collect data from 54 physically disabled students. These techniques were further used to collect data from 9 heads of schools and 18 PE teachers. Findings were No physical facilities have been structured to accommodate learners with disabilities, low adequate aiding facilities like brails, climbing stairs in our school, very low teaching and learning aids for learners with disabilities, curriculum is not relevant to the needs of the learners with disability, low funds to buy instructional materials, physical education teacher do not encourage students with disability*

**Keywords:** Challenges, Curriculum, Disabilities, Infrastructure, Participation

**THE CURRENT CHALLENGES AND FUTURE PROSPECTS OF U-17 MALE  
FOOTBALL PROJECTS IN AMHARA REGION WITH PARTICULAR REFERENCE  
TO OROMO ETHNIC ZONE**

**BY: DANIEL TAYE**

**MAJOR ADVISOR: MILKIYAS BASSA (PH.D.) ASSOCIATE PROFESSOR  
CO-ADVISOR: AFEWORK ASALE (ASSI. PROFESSOR)**

**ABSTRACT**

*The purpose of this study was to exploring the Current Challenge And Future Prospect of Youth Football Project In Amhara Region With Particular Reference To Oromia ethnic Zone U-17 male football project for the implementation of the study. A descriptive survey design was employed for sample youth project with 25 players each were selected from 7 Oromia zone participant projects (Bati ketema agelgelot football project, Kemisse ketema agelgelot football project, Chefarobit Tesfa project, Dewachefakalehiwot football project). The selection of four youth projects was conducted by simple random sampling technique. This sample technique was selected because it gives equal and independent chance for all projects in the define population of being selection sample. Thus, the target group in the study were 100 players, 8 coaches (4 main and 4 assistance coach), 4 sport office experts, 12 technical staff. In this study, a descriptive survey method was employed. Questionnaire was dominantly used as a data collection instrument; unstructured interview and observation were also used in the process. The data gathered through questionnaires were analyzed by using frequency counts and their percentage: were as the data gathered interview and observation through descriptive statement. The data are analyzed by using computerized statical package software (SPSS Version 20). The majority finding include lack of support and encouragement from their families, using inappropriate or wrong method of coaching styles, lack of budget, shortage of facilities and sport related equipment during the training session, the absence of nutrition are affected the development of youth project. Hence to make the football youth effective and successful, the concerned body supply the project sufficient facilities and equipment, project should be get well assigned educated or professional coaches, coaches should use plan, apply better coaching style, coaches and sport commission manager should organize the awareness program with families of players to effective in football performance, allocating sufficient budget for the project, supply project sufficient well balanced diet.*

**Keywords:** Practice and Challenges, Youth Football Project, technical manage.

**EFFECT OF 12 WEEKS STEP-AEROBIC EXERCISES ON SOME SELECTED  
HEALTH RELATED PHYSICAL FITNESS COMPONENTS OF ADULTS AT  
SIYADEBRNA WAYU DENEBA WEREDA PREPARATORY AND SECONDARY  
SCHOOL**

**BY: ASNAKEW NIGATU TESHOME**

**MAJOR ADVISOR: AFEWERK ASSALE (ASS.PROFESSOR)**

**CO-ADVISOR: BELAYNEH TSEGAYE (ASS.PROFESSOR)**

**ABSTRACT**

*The aim of this study was to evaluate the effects of step aerobic exercises on some selected health related physical fitness components of adult fitness for health trainees' in Siyadebrna Wayu Deneba woreda Preparatory and Secondary School. Regular physical exercise is an important factor to improve health and well-beings. Research suggests that regular aerobic exercise has the potential to improve executive functioning, even in healthy populations. To achieve the purpose of the study 30 men, who did not participate in any other special training program, were selected randomly as subjects from Siyadebrna Wayu Deneba woreda Preparatory and Secondary School. Their age ranged between  $34 \pm 3.7$  (year).The experimental group has provide 12 weeks the effect of step aerobic exercise on some selected health related physical fitness components of adult trainers . The variables selected for the study (Cardiovascular endurance, Flexibility, muscular Strength and muscular Endurance) had been evaluated by Home step test, Sit and Reach, Chin up and Sitting Tuck tests respectively. Then after before the training and after the twelve weeks of step-aerobics training program tests were given on each variable. Finally, the data were analyzed by statically package of social science, version 20software with Paired sample T-test. The study investigated that 12 weeks of step aerobics exercises shown statistically significant differences on home step test and sit and reach tests and no significant difference on chin up and sitting tuck test values. Generally, this study recommended that moderate intensity step aerobics exercise has significant effect on some of health-related physical fitness components of male adult fitness for health trainees.*

**Key Words:** Aerobic dance, Aerobics, Health related physical fitness, Step Aerobics.

**CHALLENGES AND PROBLEMS OF PHYSICALLY DISABLED STUDENT'S  
PARTICIPATION IN PHYSICAL EDUCATION PRACTICAL CLASSES: THE  
CASE OF SOME SELECTED SECONDERY AND PREPARATORY SCHOOLS OF  
ARBA MINCH TOWN**

**BY: BELAY EPHREM ZEGEYE**

**MAJOR ADVISOR: - DEBREWOK TESFAYE (ASS. PROFESSOR)**

**CO-ADVISOR: - BELAYNEH TSEGAYE (ASS. PROFESSOR)**

**ABSTRACT**

*The main purpose of this study was to investigate the Challenges and problems of physically disabled student's participation in physical education practical classes in the case of some selected secondary and preparatory schools in Gamo Zone Arba Minch town. The main issues considered are physically disabled students' participation in practical class, their interest to do physical education practically and increase their participation. To this end, descriptive survey design was employed and data were gathered from 40 disabled and 20 none- disabled students, 12 physical education teachers and 8 school directors though questionnaires. The respondents sampling was carried out through purposive sample selection and available sample techniques. The data for the study was obtained through questionnaires, interview and focus group dissection techniques. The obtained quantitative data were analyzed using frequency, percentage; mean and standard deviation. The qualitative data were analyzed in word. The result indicated that the physically disabled students are not interested to do physical education practically, perception of school community affect they participation, challenges of school facility and other teaching materials. Therefore, it is recommended that depending on the result, the concerned bodies such as teachers, school directors and regional and zone educational bureau have to encourage disabled students to be participants in practical class freely to fulfill school facilities, by give equal opportunity like other subject and by motive, support, appreciation and encouraging disabled students.*

**Key Words:** physical disabled, problems, challenges and hindering

**AN ASSESSMENT OF TRAINING IMPLEMENTATION OF UNDER  
FIFTEEN MALE FOOTBALL PROJECTS IN WOLAITA ZONE,  
SOUTHERN ETHIOPIA.**

**BY: DANIEL DESSIE ATARO**

**MAJOR ADVISOR: AFEWORK A (ASS. PROFESSOR)**

**CO-ADVISOR: BELAYNEH T (ASS. PROFESSOR)**

**ABSTRACT**

*The major objective of this study is an assessment of training implementation of under fifteen male football projects in Wolaita zone, Southern Ethiopia. To do so, samples of 81 individuals were selected from the existing 81 population of the study in which 75 football players, three(3)coaches and three (3) from projects coordinators' included. Available employed by the researcher to select the players from three woredas that means Bodit, Sodo and Gasuba woredas. Whereas Available sampling technique was used by the researcher to select coaches and wolaita zone projects coordinators. Besides, questionnaires, interview and observation were used as data gathering tools. The organized data was presented and analyzed quantitatively by the methods of descriptive statistics such as frequency and percentage. In addition to this the researcher also used Kruskal-Wallis test and Mann Whitney U test in order to know whether a statistically significant difference is there or not in between youth football project players. The result of the study found that Sodo under fifteen football players progress compared to past years are higher than from both Bodit under fifteen and Gasuba under 15 project trainers. Bodit and Gasuba under fifteen project players have less knowledge about the duration of warming up and cooling down exercises when compared to Sodo under fifteen project players, The training field where Bodit and Gasuba under fifteen football projects clubs doing their activity was not suitable for performing their daily session activities, materials are not equally distributed between Sodo under fifteen youth football projects. Finally, recommendations were forwarded based on the major findings so as to solve the identified problems.*

**key words:** training implementation, youth football projects

**CHALLENGES OF IMPLEMENTING CONTINUOUS ASSESSMENT IN PHYSICAL EDUCATION BOTH THEORETICAL AND PRACTICAL CLASS IN THE CASE OF SELECTED PUBLIC SECONDARY AND PREPARATORY SCHOOLS IN MIRAB ABAYA GAMO ZONE**

**BY: YEMANE H/YESUS**

**MAJOR ADVISOR: AFEWORK ASSELE (ASS.PROFESSOR)**

**CO-ADVISOR: MILKIAS BASSA (PH.D.)**

**ABSTRACT**

*The study conducted on the challenges of implementing continuous assessment in physical education both theoretical and practical class in Merab Abaya Woreda secondary and preparatory schools. The objective of this study was to investigate the challenges of implementing CA in PE both theoretical and practical class to forward implementing CA in PE. To meet this purpose both qualitative and quantitative technique were applied. The descriptive survey design was employed in this study. The data were collected through questionnaire, interview and observation check lists. The data source was categorized in to primary and secondary. The target population of the study was 338 students, 6 PE teachers 7 principals and 2 supervisors who attended in public secondary and preparatory schools of Mirab Abaya, Wajifo and Umo lante in 2011 academic year. The study selected three schools by purposive sampling techniques and 6 PE teachers, 7 principals, 2 supervisors were selected purposively. Moreover, 338 students were selected from each school by simple random sampling method by Yemans1967 formula. Percentages, and frequency counts, were employed by using SPSS version 21. The results indicated that the implementation of continuous assessment in physical education in Merab Abaya Woreda secondary and preparatory schools have not fully practiced because of the following major challenges: students negative attitude towards PE, time constraints, large class instructional materials. To overcome these challenges, the following recommendations have been forwarded. These are: teachers should practice what they teach to curl up the negative attitudes of students, the woreda needs to be organized on job training to physical education teachers so as to upgrade their practice of continuous assessment; the woreda and other concerned bodies should strive to reduce large numbers of students per class; and reconsider the period allotted per week for physical education and the woreda and school administrators should also allocate enough budgets to purchase sports' facilities and equipment.*

**Keywords: Physical Education; Challenges; Implementing; Continuous Assessment**

**COMPARSION OF ATHLETES PERFORMANCE IN DEBRE BIRHAN  
AND MERAHABETE WOREDA ATHLETICS TRAINING CENTERS  
IN THE CASE OF NORTH SHEWA ZONE**

**BY: EHETE DEMEKE**

**MAJOR ADVISOR: BELAYNEH TSEGAYE (ASSI. PROFESSOR)**

**CO-ADVISOR: DESTA DARSEBO (PHD)**

**ABSTRACT**

*The major objective of this study was to compare the Athletes Performance in Debre Birhan and Merahbete Woreda Athletics Training Centers in the Case of North Shewa Zone Amhara Region. The study was conducted at North Shewa zone of Amhara Region; particularly Deber Brhan and Merhabete woreda athletics training centers. This study adopted descriptive survey research design. A quantitative and qualitative research methodology was used. A sample of 30 athletes from each center, the total of 60 (14 male and 16 female from each center) athletes and 4 coaches participated from both centers. Both primary and secondary sources of data were used for the study. The primary data was collected by questionnaires and documented data in athlete's performance recorded in both centers . The collected data were analyzed applying SPSS version 20. The data were presented using frequency, percentages and tabulation method followed by description. The findings revealed that when comparing the performance of the two centers, Debre Berhan and Merahbete, Merahbete was better performer in 100 and 200 meters short distance running. With respect to the rest types of events, Debre Berhan center was found to be better performer. As the data indicates, Debre Berhan was better in terms of qualification of coaches, facilities, and diet. Based on these results the researcher recommends that the centers shall be supplied with appropriate facilities, appropriate food for the athletes, environment can influence athletes performance in the time of training and competition, zone sport office can facilitate to the coach to get scientific way of training and also the stakeholders shall work with them which could make the zone more competent and the training fruitful to get better performance and achievement.*

**Key words:** Athletes, Athletics, Training Centers, Running events, Performance

**CHALLENGES OF TALENT IDENTIFICATION AND  
SUSTAINABLE DEVELOPMENT OF YOUTH MALE  
FOOTBALLERS: THE CASE OF SOME SELECTED U 15 PROJECTS  
IN SNNPR ETHIOPIA.**

**BY: ENDASHAWU TESFAYE WATRO  
MAJOR ADVISOR: MENGISTU GALCHU. (ASSIT PROF.)  
CO-ADVISOR: BELAYNEH TSEGAYE. (ASSIT PROF.)**

**ABSTRACT**

*Talent identification is a complex but important issue in competitive sport, especially in sports like football in which the ability to identify talent has significant commercial implications for clubs and players. With this in mind, the purpose of this study was to assess the challenges of talent identification and sustainable development youth male football players. The case of some selected U 15 football projects in SNNPR Ethiopia. This study utilized a descriptive cross-sectional survey design. Hence, Questionnaire of 5-point forced rating scales (Strongly Agree (1), Agree (2), Neutral (3), Disagree (4) and Strongly Disagree (5) was designed to collect data and piloted in six (6) youth U-15 projects in SNNPR Ethiopia. Test-retest method was used to test the reliability and a correlation coefficient of 0.74 was obtained. The total populations of the study were 300 football players, 6 coaches and 6 managers with total of 312 subjects from six (6) selected U-15 youth male football projects in SNNPR Ethiopia. The target respondent included 150 youth male football players 6 coaches and 6 managers in sampled youth U-15 football project. Hence, the total of 162 questionnaire were distributed and with follow-ups to each U-15 youth football project, 162 responses were received, a response rate of 100 %. Cronbach's coefficient alpha was used to confirm the internal consistency reliability between items on each scale challenges ( $r=0.74$ ). Data analysis was conducted by SPSS Version 20. Descriptive statistics was used to show frequency and percentage of respondents back ground information of the respondents, One-way ANOVA was computed to analyze the differences among the challenges in selected groups and LSD post hoc was conducted to determine which project differ from each other in relation to challenges. The findings indicate that all selected projects have challenges on talent identification, facility and equipment, coach competency and family support. ANOVA analysis revealed that there was statistically significant difference in perception of challenges in between respondent groups. As well as, there was no significant difference found in magnitude of challenges in sampled football projects.*

**Keywords:** coach competences, family support, Talent development, talent identification, and youth project.

**THE DEVELOPMENT AND CHALLENGES OF BASKETBALL GAME:  
THE CASE OF SOUTH NATION NATIONALIY REPOBLIC PEOPLE  
HADIYA ZONE**

**BY: RAHEL TAGESSE**

**MAJOR ADVISOR: DESTA DARSEBO (PH.D.)**

**CO-ADVISOR: AFEWORK ASALE (ASSISTANCE PRO.)**

**ABSTRACT**

*The study was design to investigatig the major factors of the development and challenges of Basketball game in Hadiya zonal state. To this effect, the researcher was used the descriptive survey method which is strongly believe to be the most appropriate for addressing the intended purpose of this study. The research population include a range of respondents namely Basketball coaches, sport administrator, Basketball players, physical education teachers. Total population numbers of coaches are five with purposive sampling, 25 Basketball players, 14 sports office administrative, 15 physical education teachers' respondents are select from all the sample of the study site with random sampling and Basketball federation of the zone. Three instruments such as questionnaire, interview and document analysis were used to gather the data. The descriptive analysis of the data was analyzed by using both qualitative and quantitative methods, such as frequency count's, percentage and descriptive statements. The major finding of the study clearly showed that absence of supporters' association, lack of facilities and equipment, lack or absence of play ground in the villages, most basketball projects do not have organized supporters, no effort was made by the federation for project players to have a chance to get involved in different basketball clubs after completing their training, not following scientific method of training by coaches and very low level of communication among stakeholders. To overcome these problems, the following recommendations have been forwarded: every stakeholder should work hand to hand in order to solve the problems, the government should give equal emphasis to basketball sport like other sports and the federal sport commission should construct basketball courts in different corners of the city so as to increase its popularity.*

**Key words:** - basketball, development, factors, training, and challenges.

# **A STUDY OF PREFERRED COACHING LEADERSHIP BEHAVIORS IN MALE FOOTBALL PLAYERS: THE CASE OF WOLAITA DICHA UNDER 20 - FOOTBALL PROJECT, ETHIOPIA**

**BY: NURIYA KEMAL**

**MAJOR ADVISOR;-MILKYASBASSA (PHD)**

**CO- ADVISER ;-DEBERWORKTESFAYE**

## **ABSTRACT**

*The purpose of this study was to identify the preferred leadership style and coaching behaviors of male football players of Wolaita Dicha under 20 football projects, Ethiopia. For the implementation of the study, a descriptive survey method and both qualitative and quantitative approaches were used. Questionnaire, interview and observation checklist were analyzed by using percentage, mean, standard deviation and description in word. The study subjects were selected from the availability samples. In this attempt, data were collected through questionnaires, interview and observation checklist Wolaita Dicha under- 20 football projects were by using cancans sampling technique. Thus, in the study, 28 sample respondents were selected by cancans sampling techniques from selected clubs football players and to get supplementary information for the study area. 2 coaches and 1 technique manager were selected by purposefully. The researcher raised the following questions. Such as:- What are the major factors that affect coaching leadership style and coaching behaviors of Wolaita Dicha under 20 football players?, What is the correlation of coaching styles and coaching behaviors of Wolaita Dicha under- 20 football club?, Docoaches have one best coaching leadership style that will match for their player's achievement?. The findings of the study indicated that, their coaches were democratic in some cases. But the coaches also have had short comings in few cases while applying democratic behavior, the finding of club is not free from autocratic leadership behavior. Have a good experience in applying training and instruction coaching leadership style, understanding level of the player, individual difference, family background of the player, educational levels of the players and soon. These were the most difficulties that faced to coaches to apply the best preferred coaching leadership style to enhance the achievement of player's and Finally the finding of this study is indicating that preferred coaching leadership styles have a direct relationship with players' satisfaction, achievements, performance, skills and techniques and tactic developments. At the end some recommendations were made for the preferred coaching leadership style should fit to the situation. Excellent coaches often switch instinctively between styles, according to the players behavior and the task that needs to be done to observed problems of the coaching leadership style.*

**Key words:** Achievement, coaching, football, leadership, sports

# EVALUATION OF TALENT RECRUITMENT AND DEVELOPMENT OF YOUTH MALE FOOTBALL PROJECT PLAYERS IN NORTH SHOA ZONE AMHARA REGIONAL STATE

BY: MELESE GETYE

MAJOR ADVISOR: DEBREWOK TESFAYE (ASSISTANCE PROFESSOR)

CO-ADVISOR: DR. DESTA DARSEBO (PHD)

## ABSTRACT

*This study conducted for the ultimate objective to the Evaluation of Talent Recruitment and Development of Youth Male Foot Ball Project players in North Shoa Zone. Training was the tools in producing new competent players, in other hand getting such youth player becoming difficult. Here coaches were the key actor of this practice. Therefore, this was the main topic of interest, concern, and issue of the researcher to work a research on the defined title. six youth football project players were selected, from North Shoa zone 20 weredas youth football project players including DebreSina, Shewarobit, Seladngay, Debrebirhan, Basso, and Chacha Wereda. Thus, the subjects in the study were 60 players, 6 coaches, and 6 wereda sport administrative office workers and one zonal youth project player coordinators. In this study, descriptive survey method was employed. To collect available data, the researcher used Questionnaire, interview, document analysis and observation. The data gathered through questionnaires were analyzed by using quantitative analysis through percentage and the data gathered by interview, document analysis and observation were analyzed through descriptive statements form in qualitative way. The major findings of this study were generalized as; there was inappropriate evaluation of talent recruitment and development training implementations of the project players throughout youth football projects. This includes for the project players in relation with recruiting problems and coaches for the players select with talent recruiting problem, lack of coaches' professional ethics and commitment for football profession and their trainees. In addition, lack of supportive and evaluative communication between the youth football project players and responsible youth football project player's administrative bodies were identified in the findings. Finally, lack of organized document that indicates the project status, planning problem and wrong leader ship quality in training implementation and forgetting some major part of the training session's part was assessed in the findings of this research.*

**Key words:** Evaluation, Talent recruitment, development, Youth football project players.

# **THE PRACTICE AND CHALLENGES OF COACH AND FEDERATION TO IDENTIFY TALENTED PLAYERS OF BASKETBALL TO ORGANIZE EFFECTIVE TEAM IN NORTH SHEWA ZONE, AMHARA REGION**

**BY: CHERNET ALAYU**

**MAJOR ADVISOR: BELAYNEH TSEGAYE (ASSISTANT PROFESSOR)**

**CO-ADVISOR: DEBRWORK TESFAYE (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The major objective of this study was to investigate the practice and challenges of coaches and federation to identify talented players of basketball to organize effective team in North Shewa Zone, Amhara Region. The study area was North shewa Zone Amhara region, Particularly Debre Birhan and Mida woremo woerda basketball project center. The researcher was used descriptive survey research method in order to collect real data and to manage easily. The study subject was involved the whole two project trainers by using descriptive survey methods. In this attempt, data were collected through questionnaire, interview, and observation checklist. The total population of the study was North Shewa Zone basketball project players, coaches and federations (84 in number). By using purposive sampling method the researcher took 36 players, 2 coaches and 2 federations from two projects (Debre Birehan and Mida Weremo basketball projects ).Consequently, the study demonstrated the practice and challenge of coaches and federation that talented basketball players were selected during training, competition and their attitude towards basketball and on voluntary bases. Finally, based on the major findings there was no enough and appropriate facilities for the training like gymnasium and court but also there was no communication between coaches and athletes parents and not motivate athletes during training and competition. In order to identify the talents, to fulfill available facilities to organize effective teams the stakeholder shall be jointly communicate and prepare project (source of income method) for governmental and non-governmental organization to gain materials. They would work in hand to hand to organize effective teams. To produce talented and effective team, the federation shall be selected based on knowledge and interest for the game. This are some valuable suggestions were forwarded for basketball coaches and North shewa zone basketball federation.*

**Key words:** Challenge, Practice, Talent, Talent identification.

**EFFECTS OF TEACHING AEROBIC EXERCISE ON SELECTED  
PERFORMANCE RELATED PHYSICAL FITNESS COMPONENTS  
OF STUDENTS: THE CASE OF MIDA MODEL SERVICE  
PREPARATORY SCHOOL IN NORTH SHEWA  
ZONE AMHARA REGIONAL STATE**

**BY: GETABALEW TIRFU TEFERA  
MAJOR ADVISOR: DESTA DARSEBO (PH.D)**

**CO-ADVISOR: MENGISTU GALECHO (ASIS.PROF.)**

**ABSTRACT**

*The study was conducted to investigate the effect of teaching aerobic exercise on selected performance related physical fitness components of students: the case of Mida Model Service preparatory school in North Shewa zone, Amhara Regional State. Three month of aerobic exercise training could improve student's physical fitness qualities such as Illinois agility drill, flying 30 meter (speed), one leg stand (balance) and standing long jump (power) drill. The research design was quasi-experimental with pre-post test none equivalent control group design. 63 students from Mida Model Service preparatory school were selected as study subjects and their age range were 16-19 years. 63 Subjects had divided into two groups, 30 an experimental and 33 a control group. 30 subjects were participated in low, moderate and high intensity aerobic exercise based on prepared schedule three times per week for twelve weeks, i.e. 3 days per week 40 minute duration per day. Pre and post training tests were conducted on the selected four components of skill related physical fitness variables the data collected from the study subject was analyzed using SPSS version 20.0 software. The data pertaining to agility, balance, power and speed as a component of performance related component were analyzed by paired sample 't' test to determine the difference between initial and final mean for participant. And also to compare the difference between experimental and control group the independent t-test was computed. The value was checked at level of p-value <0.05 was considered significant. The mean difference between the post and pre test results of the four performance related fitness components was significant in experimental groups but this difference is not significant in control groups. This shows that the effect of aerobic exercises on the improvement of performance related fitness components. There is a significant mean difference between post and pre test results of agility, balance, power and speed in experimental groups but there is no significant mean difference in control groups. This shows that the positive effect of aerobic exercises in each selected skill related fitness components. Based on this finding, it can be conclude that teaching aerobic exercises for more than 12 weeks has a significance effect on the improvement of skill related fitness components of students.*

**Key Words:** - Agility, Balance, Power, Speed

**EFFECTS OF AEROBIC EXERCISE ON HEALTH RELATED  
PHYSICAL FITNESS COMPONENTS ON SEDENTARY OFFICE  
WORKERS: THE CASE OF SHEWA ROBIT TOWN  
ADMINITISTRATIVE OFFICE WORKERS IN SHEWA ROBIT TOWN,  
NORTH SHOA ZONE, AMHARA REGIONAL STATE OF ETHIOPIA**

**BY: BINIAM BEKELE AYELE**

**MAJOR ADVISOR : DEBREWOK TSEFAYE (ASSISTANT PROFESSOR)**

**CO-ADVISOR : BELAYNEH TSEGAYE (ASSISTANT PROFESSOR)**

**ABSTRACT**

*The major objective of this study was to find out effects of aerobic exercise on improving health related physical fitness component of shewa Robit town administrative office workers. Twenty five administration office workers: twenty male and five female office workers were selected. Purposive random sampling technique was used in the study subject selection their age range were 25- 42 years old sedentary office workers recruited as subject from shewa Robit town administrative office. All selected subjects participated in low to moderate intensity aerobic exercise for 12 weeks ,3 days per week and 60 minute duration at 55%,60% and 70% MHR for month one, two and three respectively from April 2019-Jun 2019. The selected test batteries were health related physical fitness (cardio-respiratory endurance (step up test), muscular endurance (wall sit test), muscular strength (sit- up test),flexibility (sit and reach test) and body composition. The collected data was analyzed by paired sample t-test (Spss v.20). The result of the study found that mean difference pre post training test step up test(17.60bpm),wall sit test (27.68 seconds),sit- up test(12.48 per minute),sit and reach test (5.44cm)and BMI (1.80 kg/m<sup>2</sup>). The result obtained, in this study, indicated that there were significant improvement in cardio vascular endurance, muscular endurance, muscular strength and flexibility. But, in the case of body composition, there were reduction. Based on this finding, it can be concluded that 12 week low to moderate aerobic exercise have positive effect on improvement of HRPF components of sedentary office workers. So, different responsible bodies should take considerable action on the participation of the community on a regular aerobic exercise training program to reduce the risk of developing diseases.*

**Key Words:** Aerobic Exercise, Component, Health related, physical fitness, Sedentary

# EFFECTS OF FOOTBALL TRAINING ON SELECTED MOTOR FITNESS COMPONENTS AND FOOTBALL SKILL PERFORMANCES OF MEHAL MEDA KALE HIWOT FOOTBALL PROJECT

**BY: BEKALU SHIBESHI**

**MAJOR ADVISOR: DESTA DARSEBO (PH.D.)**

**CO-ADVISOR: MILKYAS BASSA (PH.D.)**

## **ABSTRACT**

*The purpose of the present study was to determine the effects of football training on selected motor fitness components and football skill performance of Mehal Meda Kale Hiwot football project. To achieve the purpose, Quasi-Experimental design was used. Total populations were 30 male football project players of Kale Hiwot taken by census and their age were 12-13 years. Experimental group (n=15) performed specific football training three days per a week for 10 week and Control group (n=15) didn't perform selected variable training, both groups undergone normal football training program; and both groups had taken pre and post-tests. So, all subjects participated in 3 motor fitness components and 3 football skill performance tests. The data was analyzed with the help of statistical procedures SPSS (version 25) in which mean, standard deviation and paired t test was used. The level of  $p \leq 0.05$  considered as significant level. The result showed that on speed test control group  $MD = .07333$  &  $P = .653$  while experimental  $MD = 1.66000$  &  $P = .000$ , agility test control  $MD = .03333$  &  $P = .136$  & whereas experimental  $MD = -2.27333$  &  $P = .000$ , balance test control group  $MD = .0400$  &  $p = .138$  while experimental group  $MD = 18.25333$  &  $p = .000$ , on passing test control group  $MD = .46667$  &  $P = .089$  while experimental  $MD = 3.66667$  &  $P = .000$ , dribbling test control group  $MD = .53333$  &  $P = .056$  & whereas experimental  $MD = 6.13333$  &  $P = .000$  and juggling test control group  $MD = .33333$  &  $p = .096$ , while experimental group  $MD = 7.26667$  &  $p = .000$ . Generally, the present study concluded that football training had a significant effect on Mehal Meda Kale Hiwot football project players' on selected motor fitness components and football techniques performance through the selected motor fitness components and football techniques tests.*

**Keywords:** - Agility, balance, speed, dribbling, passing, juggling, motor fitness components, football skill performance

**THE RELATIONSHIP BETWEEN STUDENTS HEALTH RELATED  
PHYSICAL FITNESS AND ACADEMIC ACHIEVEMENT IN SHEWA  
ROBIT SECONDARY SCHOOL, IN NORTH SHEWA ZONE  
AMHARA REGION**

**BY: GETACHEW SHUMYIE GEBRIE**

**MAJOR ADVISOR: - MENGISTU GALCHO (ASSI. PROFESSOR)**

**CO-ADVISOR:-DESTA DARSEBO (PH.D.)**

**ABSTRACT**

*The study was intended to investigate the relationship between students health related physical fitness and academic achievement in shewa robit secondary school, in North Shewa Zone Amhara regional state. The researcher used correlation type of research design. The study used a total of 328 high school students for the sake of sample subjects who were 178 males and 150 females. The sample subjects were selected randomly (by using Stratified random sampling technique) from each Grade level, Sex and age (14-18). The required data for this study were collected from the first semester total average academic result of all subjects and the Health related physical fitness tests of the students. A descriptive statics mean, standard deviation, independent sample T-test, achievements of the samples were used in the study. To know whether there is the relationship between health related physical fitness and the academic achievement of students were determined by using Pearson correlation coefficients. The results of the study showed medium positive significant correlation between health related physical fitness and academic performance in the male, female and total group in cooper test and wall sit test. Sit and reach test showed medium significantly positive correlations with academic achievement among female and total group participants, but male participants showed small significant positive correlation. Body mass index value had also shows small significance among the male, female and total participants with academic achievement. In this study, cardiovascular and muscular strength fitness showed medium significant correlation with academic achievement for males and females. Hence, the study recommended that an appropriate instruction in physical education is essential to enhance the students' participation in physical practice to build the students' physical fitness to promote their academic performance.*

**Key words:** Academic achievement; Health; Physical Education; Physical fitness; Sport



#### **4. College of Social Sciences and Humanities**

##### **4.1. Department of English Language and Literature**

**AN INVESTIGATION INTO THE CHALLENGES THAT ENGLISH  
LANGUAGE TEACHERS AND STUDENTS FACE WHILE IN THE EFL  
WRITING CLASSROOM AT BODITI SECONDARY AND  
PREPARATORY SCHOOL**

**BY: KIFILE CHURKO**

**ADVISOR: WONDIWOSEN T/MICHAEL (PHD)**

**ABSTRACT**

*The main aim of this study was an exploration into the challenges that English language teachers and students face in the EFL writing classroom at Boditi Secondary and Preparatory school. Descriptive survey research design was employed using both qualitative and quantitative methods of data analysis. The data were collected through semi-structured interview and questionnaires and classroom observation. Six grade eleven EFL teachers of the Bodit Secondary and Preparatory School were selected as a participant of the study using convenience sampling technique. Among 709 students, 253 students were selected through simple random sampling technique using Slovene's sample size determination formula : ( I.e.  $n = \frac{N}{1 + N(e)^2}$ ). The Interview data were tape recorded and transcribed into textual form and the questionnaire data were analyzed via frequency, percentage and mean value form. The study disclosed that the students related factors that affects writing skills while teaching writing are: afraid of committing error, lack of commitment, anxiety, loss of confidence, carelessness, deficiency of vocabulary skills, lack of interest, lack of practice, background of students, lack of grammar skills and lack of experience practicing writing activities. The study divulged that the teacher related challenges in teaching writing skills are: lack of preparation, lack of commitment, lack of self-efficacy, lack of continuous corrective feedback, lack of motivation to practice writing skills, teaching methodology, lack of authentic materials use, writing mechanics paragraphing, spelling, capitalization and punctuation, shortage of language use accuracy when teaching writing. The study showed that class size, shortage of time and enough amount of movable chairs and tables are challenges of teaching writing skills related with school setting problems. Based on the findings, the recommendations were made: the concerned bodies should fulfill the school setting related challenges that can affect teaching and learning writing skills and the student and teacher related factors should mitigate through well-built mobilization.*

**AN ASSESSMENT OF MOTIVATIONAL STRATEGIES TEACHERS  
USE TO TEACH READING SKILLS: HANGADA SECONDARY  
SCHOOL IN FOCUS**

**BY: MARKOS TOGA**

**ADVISOR: MESHESHA MAKE (ASSOCIATE PROF.)**

**ABSTRACT**

*The purpose of this study was to assess motivation strategies teachers at Hangada Secondary School use to teach reading skills. In order to achieve this goal, descriptive research design was employed. In this study, 4 male teachers and 277 students: 153 male and 124 female students were participated. Teachers were taken through comprehensive sampling technique and students were selected through simple random sampling technique using Yamane's formula out of the total population of 900 students from grade nine and ten. The researcher used three data gathering instruments such as interview, questionnaire and classroom observation to collect data for the study. The type of interview was structured, the questionnaire included open and close ended questions, and the classroom observation was non participant one. Besides, qualitative and quantitative approaches were used to analyze data. Furthermore, the researcher intended to answer the following research questions. What motivation strategies do teachers at Hangada Secondary School use to teach reading skills? How do teachers use those strategies to teach reading skills? Which motivational strategies that teachers use to teach reading skills motivate students more to read? The researcher came up with the following findings. Teachers at Hangada Secondary School used motivation strategies such as praise, approval, positive feedback, giving mark, appreciating, providing choice and counseling service, using alternative reading materials, making students work collaboratively, creating pleasant and supportive learning environment, making good relationship with students, providing pre reading stimuli, etc. The study also revealed that teachers use those strategies by: planning, identifying students' needs and interests, linking them with real life experiences and situations to the texts, recognizing the students' choices, setting goals, identifying students' background, preparing the students, attempting to grow the community of learners in the classroom, and explaining the benefits of reading different authentic materials. It indicated that extrinsic motivation strategies motivate the students more than intrinsic ones. In this case, students were more motivated by the strategies such as arranging collaboration, linking real life experience to the text, selecting texts that connect students' interests with their backgrounds, providing constant positive feedback, recognizing and celebrating students' achievements, focusing on their strengths rather than their weakness, and making reading fun- not frustrating, etc. Finally, it was recommended that teachers should use alternative authentic materials, creates awareness to students and expected to change their outlook towards reading skills, give more emphasis to intrinsic motivation strategies than extrinsic ones, library should be well organized and there should be reading club in school level.*

**INVESTIGATING STUDENTS' PARAGRAPH WRITING PROBLEMS,  
CAUSES OF THE PROBLEMS AND TEACHERS' PRACTICES IN  
TEACHING PARAGRAPH LASHO KERA SECONDARY AND  
PREPARATORY SCHOOL GRADE 11 ENGLISH CLASS IN FOCUS**

**BY: ZEWDE JUTA**

**ADVISOR: ABRAHAM KEBEDE (ASSOC. PROFESSOR)**

**ABSTRACT**

*The main purpose of this study was to investigate the major problems experienced by grade eleven students in writing paragraph causes of the problems and teachers' practices in teaching paragraph . The study was carried out in grade 11 students of LashoKera Preparatory School. Descriptive research design was employed to address the problem. Availability sampling technique was used to select teacher participants, and random sampling technique, especially lottery method was employed to select student participants. In order to achieve the objectives, the study employed four datagatheringtools: document analysis, open-ended questionnaire, semi-structured interview and non-participant classroom observation. All data collected using different tools were analyzed qualitatively. The study identified the major paragraph writing problems students' encounter. These are problem of organization, unity, grammar, punctuation, capitalization and spelling. In addition, factors that were affecting students' paragraph writing were divided into students' related factors like lack of knowledge of strategic use, students' writing apprehension, shortage of vocabulary and teachers' related factors such as teachers' way of giving feedback. Therefore, since paragraph writing is a skill that could be improved through sufficient practicing, LashoKera Preparatory school students should have been given chance of learning and practicing features of good paragraph to effectively use them to write a paragraph.*

# **Challenges Of Teaching And Learning Reading Skill In The Context Of Communicative Language Teaching Approach: Tebela City Administration General And Secondary School And Sodo Town, Gututo Larena General And Secondary School Grade Ten Students In Focus**

**BY: ABERA KOLCHA**

**ADVISOR: DINKU GEBEYEHU (PHD)**

## **ABSTRACT**

*The purpose of this study was to identify the challenges of teaching and learning reading skills in the context of communicative language teaching approach. For this purpose, Tebela City administration General and Secondary School and Sodo town Gututo Larena General and Secondary Schools were selected as a research setting. Descriptive research design was employed for the current study. Systematic random sampling technique was used to select sample of students. To collect the necessary data for the study, semi-structured interview for six teachers and four students, questionnaire for two hundred sixty four students, classroom observation and text analysis were employed. To analyze the collected data, qualitative and quantitative methods of data analysis were employed. That is, data collected through questionnaires and text analysis were analyzed quantitatively employing descriptive statistics such as frequency and percentage while responses obtained from interview and classroom observation were described and discussed qualitatively. Based on the analysis of data, teachers were found teaching grammar and vocabulary without context. As a result, they were not using different strategies to develop different skills through reading skill. Different activities which invite learners to practice, activities like individual work, pair work and group work were not supported by up dated materials, like magazine, newspaper, pamphlets. Moreover, lack of controlling, assessing, facilitating, monitoring, tutoring on the learners' activities were found. From the students' side, low interest to make a discussion based on the reading activity; use of native language in translating the reading text; fear of making mistake, lack of participation in pair work, Fear of teacher, Fear of friend, lack of redness in given task, lack of experience and lack of interest to speak about the reading task in a large class size; factors associated to the reading text are wide content of the text, insufficient time to manage the readings' task, unrelated content to students background, using number of unfamiliar words, number of long sentences, long words and idiomatic expressions. Incorporation of unmanageable pre, while and post- reading activities. Based on the findings, the researcher concluded that teachers were careless when teaching reading skill in context of CLT approach and focused on traditional teaching system, students were loss audacity and motivation to practice in English language using different activity during learning reading skill in context of CLT approach and instructional materials were unsuitable for teaching and learning reading skill in context of CLT approach. According to findings the researcher recommended that teachers and students should carry out their responsibility, educational bureau officials and school director should create conducive environment and text developers should concenter the prior knowledge of students.*

**Key words:** challenges, teaching, learning, reading Skill and CLT

# **Investigating Motivational Strategies Teachers' and Students' Use English Essay Writing: The case of grade 11 at Tebela preparatory.**

**BY: MEHAREB GETA**

**ADVISOR: MESHESHA MAKE (ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*The main objective of this study was to investigating motivational strategies teachers' and students' use English essay writing classroom. For this purpose, Tebela preparatory school was selected as research setting. To achieve the objectives, descriptive design was used. The total population of this study was 36. Simple random sampling was used to select sample of students' .Therefore, the researcher selected 31 students from grade 11 and 5 English language teachers as a sources of data. To collect the necessary data for the study, semi-structured interview for five teachers, questionnaire for 31 students and classroom observation were employed. To analyze the collected data, quantitative and qualitative methods of data analysis were employed. That is data collected through questionnaire were analyzed employing statistical tools such as frequency and percentage using SPSS version 20, whereas responses obtained from interview and classroom observation were analyzed qualitatively. The study revealed that teachers do not practice motivational strategies of essay writing,. Similarly, teachers also do not know their expected theoretically roles and the roles of their students in essay writing classroom. The implementation of practice of motivational strategies of essay writing classroom situation was not as expected. The study conversely indicates that there is a clear mismatch between what teachers as well as students practice of motivational strategies of essay writing and what they actually implement in the actual classes .lack of training, and giving inadequate attention about practice motivational strategies of essay writing, problems related to students such as lack of interest, regular practice, motivation, and teacher's constructive comment. The researcher recommends that theoretical knowledge of English teachers must be matching to what they practically implement by getting adequate training.*

**INVESTIGATING CHALLENGES OF LEARNING AND TEACHING  
SPEAKING SKILLS IN ENGLISH: GRADE ELEVEN AT GENDO  
PREPARATORY SCHOOL IN FOCUS**

**BY: MENGISTU ZEWDE**

**ADVISOR: DR.WONDWOSEN.T (PHD)**

**ABSTRACT**

*The purpose of this study was to investigate challenges of learning and teaching speaking skill in grade eleven English classrooms at Gendo Preparatory School. The study was conducted to find out the challenges and the causes of the challenges that the students faced and the possible solutions that their teachers took to solve the problems while learning speaking skills. A descriptive research design was employed in this study by using both quantitative and qualitative approach. The sample population of the study included 140 grade 11 students and 6 grade 11 English language teachers. The students were selected by using simple random sampling technique from the total population 420, whereas all 6 English language teachers were involved without sampling as their number is very small and manageable. The instruments used to collect the data were questionnaires, interviews and classroom observation. The data were analyzed using quantitative and qualitative data analysis methods. The data collected through close-ended questionnaire from the students were analyzed by descriptive statistics such as percentage and frequency, whereas the data collected through interview and classroom observation were analyzed qualitatively. The results showed that the existence of problems related to student such as fear of making mistakes, anxiety, problem of motivation, lack of confidence, shyness, poor background of speaking experience, lack of basic language skill, problem of listening, having limited vocabulary etc. The findings also revealed that the problems related to teachers such as teachers' belief about language teaching and learning, and teachers' methodology of teaching. Moreover, the study also indicated that the problems related to instructional materials like lack of authentic textbooks, and other related references. It was concluded that students, teachers and instructional materials related problems that affect students' and teachers' learning and teaching process in EFL classroom. Based on the findings, it was recommended that in order to improve the students' speaking abilities above all, students have to practice speaking skill with their classmates inside and outside the classroom. The teachers teaching methodology should be shifted from teacher-centered to student-centered. Furthermore, to enhance students' speaking skills in the English language, both EFL teachers and students have to play their appropriate roles.*

**ENGLISH LANGUAGE TEACHERS' AWARENESS, ATTITUDE AND PRACTICES TOWARDS TEACHING READING COMPREHENSION STRATEGIES THE CASE OF BELE SECONDARY SCHOOL.**

**BY: ABERAFOLA**

**ADVISOR: MESHESHA MAKE (ASSOCIATE PROFESSOR)**

**ABSTRACT**

*The aim of this research was to investigate English language teachers' awareness, attitude and practices towards teaching reading comprehension strategies at Bele Secondary and preparatory School. Descriptive research design was employed. The twenty four English language teachers who taught in Bele Secondary and Preparatory School were selected purposefully as the subject of the study. To put this in to effect, both quantitative and qualitative approaches were employed. Questionnaire, interview and observation for teachers were used to collect data. Then the collected data were analyzed using quantitative and qualitative methods of data analyses. The study revealed that the majority of English language teachers had no enough awareness and did not practice properly the reading comprehension strategies in the classroom. Moreover, the finding of study indicated that teachers hardly engaged their students in reading comprehension strategies practices except of few strategies. In addition, the result of this study showed that there were very few strategies forwarded by teachers. These are: asking questions and answering, generating questions and representational skills. In general, the result indicated that the majority of EFL teachers did not use basic strategies of teaching reading comprehension strategies what expected from them. Thus, it is recommended that English language teachers should give special attention to teaching reading comprehension strategies.*

# **CRITICAL ANALYSIS OF GENDER-SENSITIVE WOLAITA PROVERBS: SOCIETAL VALUES; INEQUALITY AND DECISION MAKING IN FOCUS**

**BY: AREGASH TEKILE**  
**ADVISOR: DR. DINKU GEBEYEHU (ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*The socially-created and stereotyped picture of gender has been reflected in Wolaita's proverbs when people interact in different social settings. These proverbs have to be studied to investigate their implications for gender inequality. To this end, this study was aimed to analyze the proverbs from sensitivity; inequality, decision making. To collect the data, Key Informant Interview, Document analysis and Focus Group Discussion (FGD) were used. Purposive and snowball sampling techniques were used. Using these techniques, 90 elders from 6 woreda were participated in the interview. 10 people were also involved in the FGD from the professional and government organizations. 70 proverbs were selected for the study. The selected proverbs were categorized into three thematic areas and analyzed qualitatively. From the analysis of the proverbs, it was found that women are highly oppressed. Therefore, the linguistic and folkloric instrumentality of the proverbs is so energetic in encompassing all forms of power imbalance between men and women thereby aggravated gender inequality in the traditional society of Wolaita. As a result, women become so endangered by the household based violence. This tradition-bound practice has seriously dictated women from claiming their human right and keeping them voiceless to protect themselves. Women who insist to protect their violence are leveled disobedient to the dominant rules of Wolaita traditional. In conclusion, it can be said that gender-related proverbs in Wolaita zone have created the system of social institution which maintained the patriarchal society. Therefore, the researcher recommended socio-cultural transformation via emerging discourses that show gender equality. This is because gender equality may not be obtained by only having certain legal rules that guarantee the protection of those expected rights of women.*

**CHALLENGES AND PRACTICES OF TEACHING AND LEARNING  
SPEAKING SKILLS: THE CASE OF GESSA SECONDARY AND  
PREPARATORY SCHOOL.**

**BY: ASFAW ANKESHE**

**ADVISOR: MESHESHA MAKE (ASSOCIATE PROFESSOR)**

**ABSTRACT**

*The purpose of this study was to examine the challenges and practices in teaching and learning speaking skills: the case of Gessa Secondary and Preparatory School. The study employed descriptive research design and both quantitative and qualitative methods of the research, in which the concerned bodies (students and English language teachers), were participated. Afterwards, simple random sampling technique of lottery method was used to select students, whereas availability sampling technique was employed to include English language teachers of the school. Specifically, 247 students and 3 teachers were participated in this study. The relevant data to the study were collected through questionnaire, interview and classroom observation. The collected data were analyzed by using percentage, mean, and narration. The problems most frequently cited were: failure in providing immediate feedback for their students after speaking task, large class size, students' nervousness to perform speaking tasks, students' lack of interest to perform speaking task, low English proficiency, low level of motivation, encouraging passive students to participate actively in speaking tasks, supplementing text book with other materials, assisting students to solve their learning problems by themselves, mother tongue interference during discussion and domination of some students during speaking lesson. The suggested solutions were focused on allowing students to speak in class, walking around in the class to check whether students are discussing on the given point, providing necessary guidance along with immediate feedback for their students after speaking task, minimizing students' nervousness by advising students not to fear of any mistakes since mistakes are learning opportunities, providing sufficient time for speaking activities to increase each student's opportunity to practice, encouraging and using different speaking activities, developing learners' abilities to communicate in a second language, developing their spoken English competence, helping students overcome shyness letting students to practice speaking freely and cooperative behaviors to make students feel comfortable when speaking in the class.*

# **ASSESSING INTERNET QUALITY OF SERVICE WITH RESPECT TO MOBILE LEARNING**

**BY: MATUSAL MALAKO**

**ADVISOR: DR. ASRAT MULATU (PHD)**

## **ABSTRACT**

*Mobile learning is widely accepted in education. It enables teachers and learners any where at any time. Mobile technology has such accept significance; very few Studies have been conducted in the area of applying m- technology in education sector in general and in Ethiopia specifically. The growth and existence of m- learning or mobile learning does not depend only to the growth of mobile technology applicable to mobile learning. But, it is impossible for someone to log on to a learning management system wirelessly from a personal digital assistance if wireless networks do not exist or if Personal Digital Assistances does not support wireless connectivity. Regarding wireless connectivity, there are many complaints from users of mobile network communication in Ethiopia. Therefore, the main issues of this study was to assess the quality of internet service with respect to mobile learning and proposed a new Quality Based Mobile Learning System Framework for Distance Learning in Ethiopia. Hence, the study identified that the internet service provided for m-learners has low quality, and needs infrastructure update to access quality service for learners. To help distance education in Ethiopia the study proposed the quality based m-learning framework.*

Key words: mobile learning, quality components, m-learning frame work

**ASSESSING THE PRACTICES AND CHALLENGES OF TEACHING  
AND LEARNING ESSAY WRITING: GRADE 11 STUDENTS OF  
GILGEL BELES SECONDARY AND PREPARATORY SCHOOL IN  
FOCUS**

**BY: SEID KASSAW**

**ADVISOR: WONDWOSEN T. (PHD)**

**ABSTRACT**

*The purpose of this study was to investigate the practices and challenges of teaching and learning essay writing: Grade 11 students of Gilgel Beles Secondary and Preparatory School in focus. Thus, a descriptive research design was used to study the practices of learning writing skill. Both quantitative and qualitative methods were used to gather the data. The sources of the data for the study were grade 11 students and 2 EFL teachers. All grade 11 students and 2 EFL teachers were selected using comprehensive sampling technique since the participants were not many in number and manageable. The researcher contacted 4 students for interview using purposive sampling technique. The data collecting instruments such as questionnaire, semi-structured interview and classroom observations were used. The collected data through close-ended questions were analyzed using descriptive statistics, such as frequency and percentage. The data gathered through interview and classroom observations were analyzed qualitatively. The findings of the study showed that learning essay writing were practiced and students were given sample written works while learning essay writing. However, the practices of learning essay writing through different approaches, giving and receiving feedback while learning writing, students' active participation and evaluating the students' written works were ineffectively implemented in the study area. Regarding the challenges of learning writing skill: lack of language proficiency, lack of motivation, lack of commitment, lack of pedagogical knowledge of the teacher, lack of academic knowledge of the teacher and inadequate time given for writing instruction were challenges students face while learning essay writing. Whereas, students' motivation, interest and background in essay writing were challenges teachers faced while teaching essay writing. Moreover, the existence of misbehaved students was challenges teachers faced. Finally, it is recommended that teachers should encourage students while teaching writing and they should develop writing teaching methodology. Whereas, students should develop their language proficiency and they should act actively during writing instruction class. Moreover, teachers, the school leadership and students' parents should advise students to act well during classroom teaching and learning writing instruction.*

# **EXPLORING TEACHERS' PRACTICES OF USING SHORT STORIES FOR TEACHING ENGLISH SPEAKING SKILLS: GRADE ELEVEN OF DAMBOYA PREPARATORY SCHOOL IN FOCUS**

**BY: MISGANA TESFAYE**

**ADVISOR: DEREJE HAILE (PHD)**

## **ABSTRACT**

*The purpose of this study was Exploring Teachers' Practices of using Short Stories for Teaching English Speaking Skills for Grade Eleven of Damboya Preparatory School. The study employed descriptive research design. To attain the stated objectives, purposive sampling technique was used to select the target school and the targeted respondents of the study. Accordingly, sixty four students and English language teachers who have been teaching English subject for preparatory classes were used as the participants of the study. Both the students and the teachers were from Damboya Secondary and Preparatory School. To collect the data, questionnaire, document analysis and focus group discussion were used. The data were analysed both quantitatively and qualitatively. The data in the questionnaire were analysed by calculating the percentages and frequencies. The results of the research pointed out that the short stories incorporated to teach speaking skills in English textbook of grade eleven and the speaking activities derived from the incorporated short stories of the same class according to the data attained from students and teachers were insufficient and less than the needed though there is no criteria to limit numbers of short stories to be incorporated. Using the incorporated short stories needs teachers' use of various techniques like grouping students for discussion, motivating them as they retell short stories orally and teaching as students complete the remaining plot of short stories. For the reason that different major hindering factors like large class size, authors' culture, vastness of English language text book and understanding of students towards short stories role to enhance speaking skill, there was a gap in the use of the incorporated short stories to teach speaking skills. As a result, based on the findings of the study, recommendations were forwarded to alleviate the aforesaid problems in the school under study.*

**Key Terms: Text exploration, text analysis, speaking skills, short storie**

**CHALLENGES AND OPPORTUNITIES OF TEACHING AND LEARNING  
VOCABULARY: IN THE CONTEXT OF COMMUNICATIVE  
LANGUAGE TEACHING APPROACH WITH REFERENCE TO BODITI  
SECONDARY AND PREPARATORY SCHOOL GRADE 12<sup>th</sup> TEACHERS  
AND STUDENTS IN FOCUS**

**BY: ZEKARIAS DODA**

**ADVISOR: DINKU GEBEYEHU (PHD)**

**ABSTRACT**

*The purpose of this study was to explore challenges and opportunities of vocabulary teaching and learning in the context of communicative language teaching method in Boditti secondary and preparatory school grade 12 English language teachers and students in focus. Participants of the study were 153 students selected by simple random sampling technique from 625 total populations. The data gathered through questionnaires, interview and classroom observations were interpreted and analyzed. The data gathered via questionnaires were quantitatively while data gathered via classroom observation and interviews were analyzed qualitatively. The result of the analysis indicated that students almost have challenges in learning vocabulary in communicative context. The challenges were related with lack of interest to use opportunities in communicative learning method and teachers often focus on grammatical rule. As a result learners were forced to exercise from the text book without pushing them in to talk in group. Similarly, students were not voluntary in applying given opportunities from teachers. The opportunities teachers and students get in teaching and learning vocabulary in communicative context were opportunity to read different materials, apply target word, contrast words with its opposite, request teachers, ask classmates works in small group and being word conscious. Finally based on the finding, the researcher recommended that teachers should use different opportunities and communicative vocabulary teaching method and students should be interested to learn vocabulary communicatively. Besides concern bodies need to deal about a number of students and other factor that students and teachers should be consider.*

**ANALYSIS OF CONTENT VALIDITY OF GRADE TEN ENGLISH  
LANGUAGE TEACHER-MADE TESTS: THE CASE OF TWO  
SECONDARY SCHOOLS IN WOLAITA SODO TOWN**

**BY: ATNAFU DESTA**

**ADVISOR-ABRAHAM KEBEDE (ASST. PROF.)**

**ABSTRACT**

*The purpose of this study was to analyze the content validity of English language teacher-made tests administered in the two selected schools—one public and the other is governmental. Student textbook and sample exam papers were the basic source of the study. Thus, to meet the purpose of the study, one full year exam papers of 2011 E.C. were selected. Then, the contents of the textbook and sample test papers were analyzed in order to get the required data for the study. Besides, semi-structured interview and questionnaire were provided to English language teachers, and Grade Ten students in the selected schools respectively. The data collected were analyzed both quantitatively and qualitatively. Frequencies and percentages of items in the student textbook and sample exam papers were specified in the table. Then, correlation between student textbook and sample exam papers were determined by using Sydney Siegel formula and Spearman Correlation Coefficient computation which were found to be 0.21 and 0.081 respectively. Totally, the result shows that items in the sample exam papers were not adequately represented as they were in the student textbook. Therefore, there was a problem in allocating the items in tests from each content area in the teaching student text book. Thus, it was concluded that English language exams in the selected schools were very weak at content validity. Because of this reason, the English language teachers were recommend to prepare reflective exams of the student textbook and use table of specification before starting to prepare the exams.*

**FACTORS AFFECTING STUDENTS' READING COMPREHENSION**  
**IN ENGLISH CLASSROOM: THE CASE OF GRADE TEN IN GEJA**  
**SECONDARY AND PREPARATORY SCHOOL**

**BY: SOLOMON BILATA**

**ADVISOR: DINKU G.(PHD)**

**ABSTRACT**

*The purpose of this study was to identify factors affecting students' reading comprehension in English classroom in Geja Secondary School Grade 10. To attain this objective, qualitative and quantitative research design was employed. The required data for the study were collected using questionnaire, semi-structured interview, classroom observation and textbook analysis. Two grade 10 English teachers were interviewed. To cross check the information given by teachers, questionnaire were administered to 159 students and 15 students were interviewed. The reading activities of all reading sections of the textbook were analyzed. All, four classes were observed each two times to see how students actually practiced the reading activities in English classroom. The results of the study indicated that most of the students were not actively participate in reading activities. . They did not properly play their roles due to various factors. The findings of the study, therefore, revealed that more than half of the teachers and students were not applying the three stages of teaching and learning reading ( pre- while and post) in EFL class room. Majority of the teachers were not engaging their students to work cooperatively rather than doing individually. Thus most of the English classroom was dominated by EFL teachers. On the other hand, the study depicted that majority of students were playing passive roles in reading activities. Based on findings, it was concluded that majority of teachers and students were not following the three stages of reading ( pre, while and post) strategies of reading and did not apply some useful reading strategies in English classroom. Majority of teachers and students did not positively perceived the comprehension strategies as useful in teaching and learning reading skills in English classroom. The findings of the study therefore revealed that vocabulary of the texts, sentence complexity, text cohesion and coherence, elaboration of texts, length of the text and text structure were the main factors that impeded students' reading comprehension practice. Finally, it was recommended that teachers and students should use reading strategies that will help them to actively participate in doing reading activities. Both teachers and students should implement most recommended ways of teaching and learning reading skills .In order to improve students' reading skills and to help them develop some useful reading strategies they should be encouraged to actively engage in doing reading comprehension activities.*

**TEACHERS' AND STUDENTS' PERCEPTIONS AND CLASSROOM  
PRACTICES OF COMMUNICATIVE LANGUAGE TEACHING IN THE  
CASE OF GRADE 10 AT YIFAG AND ADDIS ZEMEN SECONDARY  
SCHOOLS**

**BY: ESUYAWKAL ASSEFA**

**MAJOR ADVISOR: ABRAHAM KEBEDE / ASS. PROF/**

**ABSTRACT**

*The main objective of this study was to investigate the teachers' and students' perception towards CLT, how frequently they employ its principles and practice CLT in language class and problems related to teachers and students that hinder the implementation of CLT. In this research work, descriptive design was chosen because of its appropriateness to gather the necessary data in the actual class room while the teaching learning of EFL is taking place. It is also appropriate to the nature of the study and research questions. The data were collected through questionnaires, class room observation and interview made with teachers and students. Both the teachers' and the students' questionnaires included close ended items. In the course of data collection process questionnaires were distributed first and then class room observations were made and finally the interviews were applied. The questionnaires were filled by 25 teachers and 114 students. Classroom observations were made on 5 teachers and interviews were done with 4 teachers and 10 students randomly selected from 25 and 114 teachers and students respectively. Both qualitative and quantitative methods of data analysis were used in the study. The data which were gathered by the questionnaire were analyzed quantitatively using frequency and percentage, but the data which were collected by classroom observation and interview were analyzed qualitatively in words and descriptions. The general findings of this study depicted that, both teachers and students have positive perception towards CLT methodology. However, the result of the study proved that their perception and what they actually practice CLT in class room is unrelated. The result of the teachers' and the students' questionnaires reveal that there are challenges related to the teachers' and the students' related issues. The study also proved that EFL teachers at Yifag and Addis Zemen secondary schools employed the non-communicative activities in their EFL classes. It is recommended that EFL teachers should employ communicative language teaching classroom activities.*

**TEACHERS' AND STUDENTS' PERCEPTIONS AND PRACTICES OF  
TEACHING READING THROUGH TASK BASED APPROACH: SHANTO  
SECONDARY AND PREPARATORY SCHOOL GRADE 9 IN FOCUS BY  
TAMIRAT GETA**

**BY:TAMIRAT GETA**

**ADVISOR: DINKU GEBEYEHU (PHD)**

**ABSTRACT**

*The main objective of this study was to describe English language teachers and students' perception and practice of teaching reading through task based approach in shanto secondary and preparatory school students in focus. To answer the research questions, descriptive research design was employed. To this end, six EFL teachers and seventy two students of grade nine were taken. To collect data; questionnaire, interview and class room observations were used. The distributed questionnaires were collected. The interviews were carried out with six teachers each at time and their actual teaching classrooms were also observed. The data obtained from the questionnaire were analyzed quantitatively. The data obtained from interviews and class room observations were described qualitatively. The analysis showed that teachers and students had negative perceptions towards teaching reading and learning via task based approach. In addition, the study revealed that they rarely practiced task based approach. Thus, the study indicated that the English teachers didn't practice task based language teaching and learning in EFL classes. Finally recommendations were drawn based on the above findings.*

**AN INVESTIGATION OF STUDENTS' ATTITUDE TOWARDS THE USES  
OF SHORT STORIES FOR COMMUNICATIVE LANGUAGE LEARNING  
THE CASE OF WOLAITA SODO UNIVERSITY SECOND YEAR  
ENGLISH STUDENTS**

**BY: LIDETU GOMERA**

**ADVISOR: DEREJE HAILE (PHD)**

**ABSTRACT**

*The aim of this study was to investigate students' attitude towards the use of short stories for communicative language learning at Wolaita Sodo University second year English students. Qualitative research design was employed to achieve the objective of the study. All second year English students and two instructors who have taught short story course at Wolaita Sodo University department of English language and literature were also the population of this study. Total sampling technique was employed for using 42(100%) students and two instructors whose number was small and manageable. And also these instructors who taught short stories and had experience of teaching the course were selected purposeful to use as the subjects of the study. Again the researcher used total sampling to employ semi structured interview questions to students. The data was obtained through open-ended questionnaire and semi structured interview questions items and were analyzed qualitatively. Questions were developed by the researcher and they were distributed to students. Semi structured interviews were conducted to the two instructors of short stories course face to face. Next the relevant data were collected and analyzed. From data analysis different findings were obtained. According to data gathered, analyzed, interpreted and discussed the factors hampered the implementation of short stories for language learning were learners poor background knowledge, lack of awareness, inappropriate materials, low level language proficiency, mother tongue interference, lack of interest and negative attitude. The study revealed that EFL students had gap of understanding of the exposure of short stories to culture of target language which can enhance their communicative competence. Based on the findings the summaries, conclusions and recommendations were derived.*

**FACTORS THAT AFFECT THE PRACTICE OF TEACHING-LEARNING  
SPEAKING SKILLS THROUGH GROUP DISCUSSION: GRADE 10  
BENJA SECONDARY SCHOOL IN FOCUS**

**BY: DAWIT BEDILU  
ADVISOR: SOLOMON MEKONIN (PHD)**

**ABSTRACT**

*This study was conducted with the objective of assessing factors that affect the practice of teaching learning English through group discussion. The study was conducted in government school found in Jimma zone Nono Benja woreda. The subjects of the study were grade ten students and English teachers at Benja Secondary school. Eighty (81) students and three English teachers were selected for the study. In order to select student participants for the study, the researcher employed simple random sampling (lottery method). Three English teachers were used without sampling. In order to collect data for the study, the researcher used questionnaire, observation, Interview and document analysis. Questionnaire was used for sample students and interview was used for teachers. The data gathered from close-ended items of the questionnaire was analyzed quantitatively using percentage where as the data from class observation, interview, and document analysis were analyzed qualitatively. The findings of the study revealed that English language teachers of Benja Secondary School mostly failed to prepare activities from the textbook, evaluate group performance and to give feedback for group discussion. Accordingly it is hardly possible to say teaching speaking skills through group discussion was implemented effectively in the school. On the other hand, even though the majority of the students of this school believed that group discussion was an effective technique and could improve their speaking skills through group discussion, they felt as other students were better in speaking English, they felt fear, worry and stress to speak English in front of their teacher in group discussion. As a result, they thought as they did not have good speaking skills. In addition to this, there were also other factors that affect the effective practice of teaching-learning speaking skills through group discussion such as high number of the students in one class, immovable desks in the class, shortage of time that given for discussion, students' interest towards English (this means most of them believed that English is difficult subject of all subjects), absence of English day in school, lack of students' confidence, students' prior knowledge (most of them did not acquire knowledge in lower grade) and lack of practicing English daily, most of activities in English grade ten text book were above students' level of knowledge. Finally, different recommendations were suggested as solution for effective practice of teaching-learning speaking skills through group discussion in the school under the study.*

**ASSESSING STUDENTS VIEW ON SPEAKING ACTIVITIES AND  
TEACHERS STRATEGIES TO PROMOTE TEACHERS' STUDENTS'  
INTERACTION: THE CASE OF BODITI SECONDARY AND  
PREPARATORY SCHOOL OF WOLAITA ZONE (FOCUS ON GRADE 11)**

**BY: DEGAFU DATA**

**ADVISOR; SOLOMON MEKONNIN (PHD)**

**ABSTRACT**

*The main purpose of this study was assessing students view on speaking activities and teachers' strategies in promoting English classroom interaction in Boditi secondary and preparatory school. To attain these objectives descriptive research design and mixed (quantitative and qualitative) research method was employed. To gather the necessary data 187 students 6 English language teachers were selected as participants. To select the samples available sampling and simple random sampling were used. The simple random was employed to select the students, whereas the available sampling was used to selects the teachers. In addition, 5 sections were selected using random sampling to select sample students and for classroom observation, The data were collected through interview, questionnaire and classroom observation, then the data gathered through these tools were organized and analyzed using both qualitative and quantitative methods. In order to create a holistic picture of these quantitative and qualitative data thus the researcher integrated and carefully discussed them all around subsequent thematic topics of the study in relation to research questions. The findings of the study revealed that English language teachers of Boditi secondary and preparatory school viewed using different strategies on speaking activities to promote English classroom interaction positively but majority of English language teachers did not use different strategies on speaking activities to promote classroom interaction When teaching English language most of the time teachers were rushing to cover the portion rather than focusing on students to promote English classroom interaction . They did not enable students practice in different activities, they simply arrange the pair and group only to cover the portion in addition to that there is lack of the effective practice in using speaking activities and strategies in actual English classroom ,lack of adequate practice based on teachers' training, lack of motivation and students' learning expectations. Therefore, it was recommended that teachers should be provided with adequate practice based on training so that they can promote their awareness on how to practice the approach in teaching English classroom to promote interaction by using speaking activities and strategies.*

# **ASSESSING GRAMMAR TASKS IN LINE WITH CLT APPROACH: GRADE 11 STUDENTS AT SODO PEREPARATORY SCHOOL IN FOCUS**

**BY: ELIAS BELETE**

**ADVISOR: WONDWOSEN TEFAMICHAEL (PH.D)**

## **ABSTRACT**

*The main objective of this study was to assess communicative grammar teaching and learning: Grade eleven Students at Sodo Preparatory School of Wolayita Zone, SNNPRS. More Specifically the Objectives of the Study were to: Investigate how the English language teachers teach CG in the EFL classes, assess the learner's engagements in CG lessons in the EFL classes and examine whether or not the EFL teachers use situations and contexts in teaching CG. To achieve the stated objectives of the study, the researcher employed a descriptive research design and mixed approaches. 84 students were selected from grade eleven using simple-random sampling technique, and 5 English language teachers of Grade eleven were selected using availability sampling technique due to their manageable number. Questionnaire was designed for both teachers and students of grade eleven. The data were gathered via questionnaire, interview and classroom observation. The data gathered through the questionnaire were analyzed quantitatively and explained via frequencies and percentages. Classroom observations and Semi-Structured interviews were conducted with the 5 English language teachers. The data gathered via classroom observations and the interviews were analyzed qualitatively using thematic analysis. The questionnaire and interview consist of close-ended and open-ended items. Thus, the findings of the study revealed that though the majority of grade eleven English language teachers used to plan and introduce their communicative grammar teaching to help and assist them. Most importantly, the English language teachers did not encourage and motivate their students to teach communicative grammar and never gave enough time to practice it through communicatively. Based on the second objective of the study, learners did not engaged in grammar tasks and also the situations were not facilitated them to practice grammar tasks in communicative way. Based on the third objective of the study, as the data gained from students through open-ended questions and teacher's interview indicated that, majority of teachers did not present grammar tasks in contextual, meaningful and purposeful way. Finally, the researcher recommended on the basis of the above findings so as to improve the practices of teaching communicative grammar skills using the alternative CLT approach.*

# **ASSESSING THE PRACTICE OF VOCABULARY TEACHING AND LEARNING TECHNIQUES: FOCUS ON GRADE 9 AT CHET GENERAL SECONDARY AND PREPARATORY SCHOOL**

**BY: ENDALAMAW ASFAW**

**ADVISOR: DINKU GEBEYEHU (PHD)**

## **ABSTRACT**

*The main purpose of this study was to assess the practice of vocabulary teaching and learning techniques in English classroom with special reference to grade nine in Chet General Secondary and Preparatory School by the year 2018/2019. To achieve the objectives of the study, descriptive research design was employed. The participants of the study were 250 randomly selected (lottery method) grade nine students and five grade nine English teachers who were taken availability sampling technique. Also, the data were gained through questionnaire, semi-structured interview, classroom observation and document analysis. The quantitative data collected from the close-ended questions of questionnaire were coded and filled in the SPSS. Then, different statistical outputs such as frequency and percentage were employed to the SPSS data. Again, the data obtained from open-ended question and semi structured interview analyzed qualitatively. From the data analysis, different findings were obtained. The study revealed that English teachers of grade nine practiced limited vocabulary teaching technique. They often taught vocabulary via translation. In the same way, the students hardly employed a variety of vocabulary learning techniques in the target school. They commonly learnt vocabulary through using bilingual dictionary, asking classmates and using vocabulary notebook. In addition, the vocabulary lessons in the student text have not been presented sufficiently with a variety of vocabulary teaching techniques. Moreover, English teachers and students were hampered by different difficulties to practice vocabulary teaching and learning techniques in vocabulary lessons. The major difficulties were students with limited knowledge of English, lack of available materials on vocabulary, the complexity of word knowledge, the difference spoken and written form of a word and the difference grammatical forms of words. Thus, teachers should implement diversified techniques of teaching vocabulary based on their suitability to develop their students' vocabulary abilities, and students should practice a variety of vocabulary learning techniques ranging from decontextualized to contextualized techniques. The school should also provide all available necessary materials for teaching and learning vocabulary such as different English reading books to promote students' vocabulary knowledge.*

# **AN ASSESSMENT OF GRADE 9 TEACHERS' AWARENESS, PERCEPTIONS AND PRACTICES OF USING AUTHENTIC LISTENING MATERIALS TO TEACH LISTENING SKILL:**

**BY: ESAYAS SEBA**

**ADVISOR :WONDIMU TEGEGNE (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess grade 9 English language teachers' awareness, perceptions and practices towards teaching listening skills using ALMs at Abba Pascal Girls' School. Descriptive research design was employed. Available sampling method was used to conduct the research. The population of this study were eight EFL teachers. To collect the necessary data for the study, classroom observation, semi-structured interview for teachers, and document analysis were used. To analyze the collected data qualitative method of data analysis was employed. That is, data collected through interview were described and discussed. The qualitative data were thematically, organized, categorized and examined in a form of statement to understand the emerging pattern of response. In addition, the data obtained from document analysis explained qualitatively to validate and triangulate the data obtained from interview and classroom observation. From the analysis of data, findings were obtained. The study revealed that the EFL teachers of the targeted school had awareness. They had also positive perceptions towards the use of ALMs to teach listening skill. The EFL teachers of the targeted school rarely use authentic listening materials to teach listening skill. Furthermore, the study revealed a number of problems related to the textbook: lack of authentic contents, objectives and activities as well as lack of contents which were supported by adequate examples which lead to use ALMs to teach listening skill directly or indirectly hinder language teaching and learning particularly listening skills. Based on the findings summary was made, conclusions were drawn and recommendations were forwarded on awareness, perceptions and practices of teachers on the use ALMs to teach listening skills and to include some important objectives, contents, units, in grade nine students' textbook in order to develop the habit of using ALMs.*

# **CHALLENGES OF IMPLEMENTING COOPERATIVE LANGUAGE LEARNING IN TEACHING AND LEARNING GRAMMAR IN CONTEXT: GACHENO SECONDARY SCHOOL IN FOCUS**

**BY: ZERITU ZAZA**

**ADVISOR: DINKU GEBEYEHU (PHD)**

## **ABSTRACT**

*The purpose of this study was to investigate the challenges of implementing cooperative language learning in teaching and learning grammar in context. This research had mixed approach: quantitative and qualitative, while its design was descriptive in its nature. The total sample of study was 120 students and 6 teachers participated through systematic random and comprehensive sampling techniques respectively. Instruments employed in this study included questionnaire, structured interview and observation. The overall findings reveal that the implementation of cooperative language learning in teaching and learning grammar in context is challenged by teacher related, student related, class settings related and learning materials related factors. Accordingly, teachers lacked knowledge and training on cooperative learning, skipped cooperative language teaching principles, consequently employed the lecture method, did not employ Student Team Achievement Division, did not give chance to students to learn cooperatively, mere explained grammar lessons instead of using contextually. Students are found to be reluctant to take responsibility for the success of cooperative language learning, lack of enough support from their EFL teachers, lack support, motivation, and follow up, feedback, lack ability to use English language in the classroom, frequently use of their mother tongue, unable to share idea each other and some of them dominate the group because they are active students. The class settings were not comfortable for both the students and teachers' movement since the desks are hinged and prevent face to face sitting, the class was large, no sufficient light. Regarding teaching learning material grammar activities were not in an integrated form, meaning and function of the language are not vividly presented. It is recommend that preparing cooperative learning training for teachers and inviting experts to share experience about cooperative learning. Cooperative learning method should be adopted by all teachers as an effective learning method in order to improve students' group learning. Grammar teaching should focus on the function of the language, rather than focusing on the form only.*

**Key Words:** Challenge, cooperative learning, grammar, implement, context

**TEACHERS` AWARENESS, ATTITUDE AND PRACTICE OF ERROR  
CORRECTION IN ENGLISH SPEAKING CLASS: THE CASE OF SOME  
SELECTED SECONDARY SCHOOLS IN DEDO WEREDA**

**BY: DABA AMENU  
ADVISOR: MESHESHA MAKE (ASS.PROF.)  
ABSTRACT**

*In this study, an attempt was made to identify Teachers awareness, attitudes and effective practice of oral error correction in English speaking class with reference to some selected secondary schools in Dedo wereda. The main purpose of this study was to investigate teachers' Awareness, attitudes and practice of oral error correction in English speaking class. The subjects of the study were all English language teachers in selected secondary schools. The study is conducted in Oromia regional state in Jimma zone. The study employed descriptive survey research methods .The data were collected through questionnaires (for teacher, classroom) observation, and interviews .The questionnaire (consisting of two thematic groups items for 28 teachers. Classroom observations and interview with 10 teachers (out of the whole subjects of the questionnaires) were administered in March and April 2011. The study revealed that the English Language Teachers have less understanding of oral error correction. On the other hand, it was found that the English Language Teachers' lacked practical implementation of correcting oral error in English classroom. The study further showed that the English language Teachers' rarely aware and understand on oral error correction. In addition to this, teachers rarely used techniques to correct oral error in English language performance of students. Moreover, most of English Language Teachers" rarely used various correcting techniques of oral error correction as well as teaching Aids and equipments. English language teachers hardly prepared to correct oral error in English class. Furthermore, English Language Teachers were rarely aware learners to apply correcting themselves in oral error. These imply that English Language teachers do not properly correct oral error in speaking class.*

# **OPPORTUNITIES AND CHALLENGES OF TEACHING AND LEARNING PARAGRAPH WRITING THROUGH PROCESS APPROACH: KARAWO PREPARATORY SCHOOL IN FOCUS**

**BY: MARKOS LORISO**

**ADVISOR: WONDOWOSEN T.(PHD)**

## **ABSTRACT**

*The study was conducted to look the opportunities and challenges of teaching and learning paragraph writing through process approach at Karawo Preparatory School particularly grade 11. The attempt was made to find out the frequency teachers employ process approach to paragraph writing. The study also tries to investigate the challenges that the teachers and students encounter while teaching and learning paragraph writing. To this end, the researcher used descriptive research design for it describes and clarifies present problem area with description. It interprets and narrates the necessary data for the study in wording. These were data gathered using different methods like questionnaire, classroom observation and sem- structured teachers interview. Two English teachers and one hundred three sample students were purposively and randomly selected respectively. Interview was conducted with two English teachers. The data collected were analyzed quantitatively and qualitatively. The findings of the study indicated that the actual practices of the teaching paragraph writing are not fully applied. The results also revealed that most of the teachers focus on the end result of the writing even though they have good awareness about the importance of focusing on the process approach. Also students lack of practice in writing in English since lower grade, lack of adequate time during writing exercises, focusing on mechanics and grammar than on contents are considered as major challenges of students problem in paragraph. On the other hand, challenges that teachers face are insufficient time, lack of students' motivation and lack of students' writing practices since lower grades. Based on the findings of the study, conclusions were drawn and some useful recommendations were forwarded. Some of them are: language teachers should participate in less co-curriculum activities, teachers should give feedback in each stage of their writing and language teachers should follow process approach while teaching paragraph writing and the likes are some.*

**PRACTICES AND CHALLENGES OF TEACHING AND LEARNING  
BASIC WRITING SKILLS COURSE: FIRST YEAR MIDWIFERY,  
PHARMACY AND NURSING STUDENTS AT WOLAITA SODO  
UNIVERSITY IN FOCUS**

**BY: MATHEWOS CHINASHO AMAJO  
ADVISOR: WONDOWOSEN T.(PHD)**

**ABSTRACT**

*The main purpose of this study was to explore the practices and challenges of teaching and learning Basic Writing Skills of first year Nursing, Midwifery and Pharmacy students of CHSM at WSU. To achieve this, the researcher employed descriptive research design and used classroom observation, semi-structure interview and both close and open-ended questionnaires to gather data from participants; both students and instructors. The data gathered from the participants were analyzed qualitatively and quantitatively. The results of all the tools disclosed that the instructors' and students' practices of basic writing skills course did not meet the objective of the course. In investigating the factors holding up the appropriate practices of the course, dominant constraints like less attention given to writing when students were at secondary school, unavailability of teaching resources and shortage of time to get students' practice were generally identified. Moreover, the students' less know how in their grammar skills, problems related to methods of teaching were the other major problems existed in the college. To alleviate the above problems; the government should take responsibilities to empower the abilities of teachers who teach at higher institutions and students need to give a great deal of attention for language learning in general and writing skills in particular. The teaching materials should adequately be available for both instructors and students to use easily and ample time should be adjusted to practice writing in EFL class in CHSM at Wolaita Sodo University.*

**AN INVESTIGATION OF TEACHERS' MOTIVATIONAL STRATEGIES  
AND FACTORS AFFECTING THEIR IMPLEMENTATION ON GRADE  
10 STUDENTS' PARAGRAPH WRITING SKILLS THROUGH PROCESS  
WRITING APPROACH: THE CASE OF GUAY SECONDARY SCHOOL  
IN FOCUS**

**BY: NEBIYU BELAYNEH  
ADVISOR: WONDOWSON TEFAMICHAEL (PHD)**

**ABSTRACT**

*The main purpose of this study was to investigate teachers' motivational strategies and factors affecting their implementation on grade 10 students' paragraph writing skills through process writing approach in Guay Secondary School. Specifically, the study was intended to: examine the type of Motivational strategies teachers use when teaching paragraph writing through process writing approach, identify how often the teachers use MSs when they teach paragraph writing through process writing approach and differentiate factors which affect the implementations of MSs in the EFL paragraph writing through process writing approach. The descriptive research design was employed for the study. Mixed research method (quantitative and qualitative) was applied for data collection and analysis. The participants of the study were all 3 EFL teachers. Besides, 77 students were selected from 342 students by using simple random sampling. Slovin's formula of sample size was applied to select the students from the whole 7 sections. The data collection tools used for the study were: classroom observation, questionnaire and semi- structured interview. The reliability and validity of the tools were tested by piloting at Debre Elias General Secondary and Preparatory School. Then, the tools were modified as per the results of the pilot test and used in the actual study. The data obtained from the close-ended questionnaire and observations were analyzed using number and percentage, but the open-ended questionnaire and interview were analyzed qualitatively. The results of the study revealed that EFL teachers tried to apply some common MSs. They: cared their students to involve in the lesson, gave clear instruction and positive feedback, interacted with the students positively, compared and contrasted students' individual and group paragraph writing activities, and designed paragraph writing tasks based on the level of the students' abilities. However, teachers did not use MSs effectively in teaching paragraph writing skills through process writing approach. For example, they did not: create supportive classroom atmosphere, give opportunities for students to assess themselves, invite senior students to share their writing experiences, bring various authentic supplementary materials, use brainstorming activities, and bring humor in writing class. Moreover, they were not interested in the lessons constantly. Factors that affected MSs in paragraph writing were: there was shortage of teaching learning resources, and large class size; the students' negative perceptions towards the lessons; students' anxiety and frustration of the lesson; and some teachers and students were not interested in the lessons. Thus, based on the findings of the study, EFL teachers should: encourage students to develop their confidence and avoid frustration, give rewards when students actively participate, create supportive classroom atmosphere, give opportunities for students to assess themselves, and use brainstorming activities as well as use various authentic supplementary materials to make the students effective in paragraph writings.*

# **ASSESSING TEACHERS' ATTITUDE AND PRACTICE OF USING LITERARY TEXTS IN TEACHING READING SKILLS: BORENA SECONDARY AND PREPARATORY SCHOOL IN FOCUS**

**BY: SALEAMLAK ABERRA**

**ADVISOR: DEREJE HAILE (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess teachers' attitude and practice of using literary texts in teaching reading skills at Borena Secondary and Preparatory School. Descriptive research design was employed to achieve the objectives of the study. English language teachers and students of Borena Secondary and Preparatory School were the participants of the study. Stratified and purposive sampling techniques in an integrative way were used to select 344 students among the total population of 2500. 9 English language teachers were also selected by using comprehensive sampling as sample participants of the study. Then, data was obtained via questionnaire, semi-structured interview and classroom observation. Questionnaires were developed by the researcher and filled in to SPSS version twenty for their standards and administered to teachers and students. Semi-structured interview was conducted with English language teachers face to face. Actual classroom observations were conducted in the classrooms. Next, the data which were relevant to the research objectives were selected and analyzed. Thus, from the data analyses, different findings were obtained. The study uncovered that: teachers had negative attitude on the relevance of literary texts in teaching reading skills. In addition, teachers' practice of using literary texts was very low; they had lack of practice of using literary texts in teaching reading skills. Towards the extent to which they use literary texts to make their students exercise for each types and strategies of reading, most of them did not use any literary texts out of the textbooks. In fact, they often used literary texts in the textbooks to make their students exercise skimming, scanning, summarizing and intensive reading only; however, most teachers did not use these texts to engage their learners exercise the following important reading skills: extensive reading, inferring, questioning, predicting, making connection and visualizing. With regard to genres of literature teachers mostly use, poems were the most frequently used because of the fact that more than half of the total literary texts in the textbooks in teaching reading skills are poems. Based on the findings, the researcher recommended that the teachers should show their positive attitude towards the use of literature in teaching reading skills and meaning full teaching of reading skills through literary texts should be practiced widely to develop learners' reading comprehension ability.*

# **PRACTICES AND CHALLENGES OF TEACHING AND LEARNING READING SKILLS: THE CASE OF WARAZA LASHO SECONDARY SCHOOL**

**BY: WONDEFRAW SELASS**

**ADVISOR: DINKU GEBEYEHU (PHD)**

## **ABSTRACT**

*The main purpose of this study was to assess the practices and challenges of teaching and learning reading in the case of Waraza Lasho Secondary School. To this end, descriptive design was employed. In collecting data, one hundred thirty four participants were taken. From the total population of three hundred ninety four students, one hundred thirty four students were selected by systematic sampling technique and four English language teachers' teachers who were teaching there now were taken without sampling since their number is small and manageable. To collect the information from the participants, three data collection instruments were used, such as questionnaire, semi-structured interview and class-room observation. The data collected by close-ended items were analyzed quantitatively while the data collected by open-ended items: class-room observation and interviews were analyzed qualitatively. The results of the analysis indicated that, the majority of EFL teachers used strategies (like read individually, work in small groups, work in large groups, do activities found in while-reading, refer an English LI dictionary, scan a text to get specific information about a text, infer the meaning of new words based on pictures, and use the new words in writing). In addition, some of the students and teachers did not practice reading during the time of reading lesson. Instead of practicing reading, they write activities and do tasks. Moreover, the factors that hamper teachers teaching reading skills and students learning reading skills were identified. The main conclusion is that investigating teaching strategies related challenges, learning strategies related challenges of reading tend to be very crucial for this study. Finally, based on the major findings and major conclusions, recommendations were made to overcome these identified challenges as while teaching and learning reading.*

**ENGLISH LANGUAGE TEACHERS' AWARENESS AND USE OF  
MOTIVATIONAL STRATEGIES IN TEACHING SPEAKING SKILLS:  
THE CASE OF FOUR SELECTED SECONDARY SCHOOLS IN OFFA  
WOREDA**

**BY: WORKU OYDA**

**ADVISOR: MESHESHA MAKE (ASSOCIATE PROF.)**

**ABSTRACT**

*The purpose of this study was to explore English language teachers' awareness, use of motivational strategies and challenges in teaching speaking skills. To meet the objective of the study, 30 teachers from four selected secondary schools in Ofa Woreda, Wolaita Zone were included for the study. To conduct the study, descriptive research design was employed to describe the phenomenon. Moreover, a combination of mixed research method was used to analyze the data collected through three instruments: Questionnaire, Interview and classroom observation. The data gathered through close-ended questionnaire were analyzed quantitatively using statistic description such as frequency and percentage whereas the data collected through classroom observation, open-ended questionnaire and interview were analyzed qualitatively. The data collected through the three tools reveal that almost all the respondent teachers were not found using varied motivational strategies rather they were found using only appraisal words and phrases most frequently to motivate their students. Based on the findings of the study, recommendations were drawn.*

## **4.2. Department of Geography and Environmental Studies**

# **THE CONTRIBUTION OF OFF- FARM AND NON-FARM FOR INCOME DIVERSIFICATION OF RURAL HOUSEHOLDS AND ITS DETERMINANTS FOR PARTICIPATION IN A CASE OF DIGUNA FANGO WOREDA, WOLAITA ZONE, ETHIOPIA**

**BY: ESHETU EMAMO  
ADVISOR: SIMEON EMANE (PHD)**

## **ABSTRACT**

*This study aimed on assesses contribution of off- farm and non-farm income diversification of local households and its determinants for the participation in Diguna Fango Woreda, Wolaita Zone. The study used descriptive survey that follows pragmatic way using a mixed approach and conducted on 240 households that were selected through purposive sampling. Data collected through structured questionnaires', interviews and key informants and analyzed by descriptive statistics, t-test, multiple regressions and binary regression using SPSS and Stata software. The reliability of the data analysis was checked with Cronbach's alpha and it was reliable. According to the finding, both off-farm and non-farm activities have shown statistically significant contribution on the income of the households and have filled most of the household's expenditure. Farmers fulfilled their basic needs and other wants through practicing these off-farm and non-farm activities. More than 87% of their expenditure was covered through these activities. Age, family size, health status, farm size, income level, transport cost, credit access and training were statistically significant on the choice of household in these business activities. However, in off-farming activities age of the households, family size, educational level, distance from the market, health status, farm size, income level transportation cost, and training were statistically significant and affected the choice of farmers in off farm activities. However; the household faced lack of capital, lack of awareness, shortage of infrastructures, attitude of society and lack of business knowledge and skill. This calls for inclusive policy and strategy that enhance the participation the households on off-farm and non-farm income diversification.*

**Key words: off-farm, non-farm, households, income, livestock**

# **SOCIO-CULTURAL IMPACTS OF CROSS-COUNTRY YOUTH MIGRATION AT AREA OF ORIGIN: THE CASE OF KACHABIRA WOREDA, KEMBATATEMBARO ZONE, ETHIOPIA**

**BY: GETACHEW HIBEBO FEUISSA**

**ADVISOR: DENEKE DANA (PH.D.)**

## **ABSTRACT**

*Impacts of youth migration to RSA and Arab Emirates have become usual phenomenon for most communities in Ethiopia. The movement of people crossing borders of a nation-state has social, cultural as well as economic impacts at the origin. Taking this in mind, the primary objective of this study was to assess socio-cultural impacts of cross-country youth migration at the area of origin. To achieve an intended objective, both qualitative and quantitative methods were applied. This study was conducted in three purposively selected kebele of Kachabira Woreda, Kembata-Tembaro Zone, Ethiopia. In this study, 171 sample of households were selected by using systematic random samplings techniques. Samples were categorised into three such as proxy of migrants 73, returnee 57 and non-migrants 41. In this study to gather relevant information both primary and secondary data types were applied. Primary data were collected through organized questionnaires, interviews and FGD respectively. Secondary data were used from published and unpublished data sources. The econometric models were used to analyze the collected data. The collected data were also analyzed through descriptively and narratively. The result of this study indicated that both male (58.48%) and female (41.52%) were migrating to RSA and Arab Emirates whose age between 20-34 (33.3%). Also, this study found out that the majority of migrants were single and 29.2% of them migrating from the elementary education levels (grades 1 to 8). Besides, this study found out that majority migrants about (30.9%), were migrating from agricultural activities. In addition, this study has also identified that the poverty, family pressure and peer pressures were the main pushing factors whereas better income, the flow of remittance, creation of job opportunities, were identified as pulling factors for youth migration at the origin. Both pushing and pulling factors have identified and resulted for 2,381 youth migrants to leave their origin. In this study logistic regression model was applied to estimate the determinants of socio-cultural impact of cross country youth migration in the origin. Independent variables- age, better income, job opportunities, loss of life, Land size, detection of culture, and marital status found to have significant association for socio-cultural impacts of cross-country youth migration. The study concluded by providing suggestions that all concerned stakeholders should have to work cooperatively to cope up the youth migration impacts at the origin.*

**Key Words: Youth migration, out-migrants, return, push and pull factors, social, cultural and economic impacts, households**

**ASSESSMENTS OF ROAD TRANSPORT INFRASTRUCTURE AND  
ITS IMPACTS ON ECONOMIC DEVELOPMENTS OF RURAL  
COMMUNITIES: THE CASE OF SHASHEMENE WOREDA, OROMIA  
REGION, ETHIOPIA**

**BY: HIRPO TIRAMO**

**ADVISORE: PAULOS LUKAS (ASSISTANCE PROFESSOR)**

**ABSTRACT**

*Impacts of road transport infrastructures on economy of rural households has recently been a serious problem due to different causative factor such as; animal knee ,topography ,change of climate ,and weather. The aim of this study was to assess effective road transport infrastructure to all sampled rural communities, to minimize the impacts of rural roads on economic distribution of farmer's commodities between farmland and nearest markets; similarly to be reference those who want to do the research on this title. The researcher also used the descriptive survey design that designed to solve the impacts of rural road infrastructures on agricultural productive of small holder farmers of study area. The sampling procedures used for this research is simple random sampling techniques in order to have better representation of whole population. The instruments of data collection for this study were both questionnaire and interviews to get sufficient, deep and real able information of respondents through face to face communication barriers. The types of data analysis for this study was both quantitative and qualitative data types that typed into computer and in order to investigate the impacts of road transport infrastructure on economy of rural communities; the researcher analyzed by statistical package for social science (SPSS) and the qualitative data used for the study was through interview and documented data. Therefore; the researcher recommended that; due to the existing rural road infrastructures of study area was poorly designed; the societies of the area was not well informed about the awareness of rural transport road to their economy ; upgrading routs, encouraging private participation, increasing frequency of services in order to improve the system for the benefits of societies.*

**Keywords:** Impacts of rural road infrastructures, to assess effective transport road, descriptive survey design, simple random sampling thecnuieqe qualitative and quantitative data, (SPSS) analysis, poorly designed road, upgrading routs, private participation.

# **EFFECTIVENESS OF PHYSICAL AND VEGETATIVE INTERVENTIONS IN REVERSING LAND DEGRADATION; THE CASE OF DAMOTTA MOUNTAIN, WOLAITA ZONE, SOUTH ETHIOPIA**

**BY: ASELA GUJUBO**  
**ADVISOR: DR. SIMEON EMANE**

## **ABSTRACT**

*The effectiveness study of physical and vegetative intervention in North Eastern Damota was conducted using cross sectional and Time serious data collected from the intervention done in the year 2012-2016 in cultivated land of total 100 H H farm of surveyed kebele villages to analyze the immediate factors that affect effectiveness of physical structures to block soil erosion as element of land degradation. For these, primary and secondary data were collected and analyzed by statistics, diagrams, pictures, tables and current satellite image maps. Field work data were collected from house hold imply that the physical structures are affected by high rain water run on, run off force over the terraces and ditches flow with eroded soil deposits. Because most part of upper slope or lower slope part are without any vegetation cover. And also the structures were not maintained continuously, as recommended by scientific S W C methods. To do away with the problem moving Damota peasant farmers to another technology supported farm in low land area and provision of off farm activities in urban areas of near town is suggested. The severely degraded land of high slope and of high population can be improved by alternative intervention of non-tillage and area closure to recover vegetation of forest. For the study, Descriptive statistical methods were used to analysis the peasant farm house holds responses, field observations, focus group discussions. From the data collected and analyzed, the expected output of physical and vegetative intervention, that is, the mitigation of soil erosion, soil fertility restoration, farm land productivity and rehabilitation of spring waters was not achieved. For this the abuse of scientific standards of SWC measures takes lion share. Then, the physical and vegetative interventions measures in North Eastern Damota villages are not effective and urge optional intervention of compensatory move of peasant farmers from degraded lands.*

**Key words;** land degradation, physical, vegetative, intervention, effectiveness, sustainable development

# **HOUSEHOLD FOOD INSECURITY AND THEIR COPING STRATEGIES IN URBAN SETTING: THE CASE OF ANSHO TOWN, HADIYA ZONE, SOUTH, ETHIOPIA.**

**BY: ABINET ZELEKE**

**ADVISOR: TEGEGN HAILU ASSI. PROF AND (PHD) FELLOW**

## **ABSTRACT**

*Food insecurity is a worrying worldwide challenge with Sub-Saharan Africa including Ethiopia. The fact that population in and around African cities growing faster than the provision of social services and food. Food insecurity challenges concerning not only rural dwellers but also urban and peri-urban areas. This study was conducted to investigate urban poor household's food insecurity situation, identify the level of food insecurity, to determine factors affecting food insecurity and coping strategies household employed to against food insecurity. In order to achieve this objective, demographic and socio-economic data were collected the investigator used 163 household heads for questionnaire, 20 household heads for FGD, 20 household heads for key informant interview. A systematic random sampling procedure proportional to size from selected three namely 01, 02 and 03 kebeles. Totally 203 respondents were involved during data collection in the study area. A survey was conducted to collect the primary data from the sampled households in study area through structured questionnaire to urban poor households. And also secondary data collected from various sources published materials, books and internets. Both quantitative and qualitative method was employed to collect socio-demographic characteristics and food insecurity related issues. The collected data were analyzed by using descriptive statistics such as tables, percentage, frequency, figures, bar graph, pie-chart. Age of HHHs, Sex of HHHs, HH size, Marital status, education status, HHs income, proportion of expenditure, access of credit are the factors that affect urban HHs food security in the study area. The findings of this research showed that 87.1% HHs were insecure, these food insecure HHs used various coping strategies during food shortage. From these coping strategies 38.0% of the household heads followed by the practice of reduce the number of consumed in a day, 24.6% of the household heads eat less expensive foods, 23.3% of the households by the practice reduction consumption during each meal, 14.1% of the household heads sometimes skip entire day without eating. The study recommended that the government target to create labor intensive jobsable to generate alternative income earning activities to labor markets, increasing household's income improved employment opportunities and strengthening family planning programs.*

**Key words:** Urban; Household; Food Security; Food Insecurity; Coping Strategies

# **DETERMINANTS OF SMALLHOLDER FARMER'S PARTICIPATION IN CASH CROP PRODUCTION AND ITS EFFECT ON HOUSE HOLD INCOME:A FOCUS ON VEGETABLE PRODUCTION IN SODO ZURIA WOREDA, WOLAITA ZONE, SNNPR, ETHIOPIA**

**BY: AYELE FANTA**

**ADVISOR: SIMEON EMANE (PH.D)**

## **ABSTRACT**

*The main objective of this study was to assess the determinants of smallholder farmers' participation in cash crop production especially vegetable production and its effect on households' income in SodoZuriya Wereda, Wolaita Zone. Both probability and Non-probability sampling procedure were employed for the selection of sample respondents. The sample size for this study purpose was 262 respondents. The sampling technique used in this study was purposive sampling techniques to select six kebeles from Sodo Zuria Wereda. To select each respondent from the six kebeles, simple random sampling technique was used.Both primary and secondary sources of the data were used. To collect primary data questionnaire, interview and focus group discussion were used. The collected data were analyzed by using SPSS version 20.00. Both descriptive and econometric data analysis methods were applied to analyze the collected data. The analyses of the results were presented in frequency table. According to the finding of this study, the major challenges faced by the vegetable producers in the study area are diseases of the vegetable, land size and Less fertility of the farmland, access to credit, information, market, water, high cost of the agricultural inputs and low price of agricultural out puts, weather condition. According to the findings of this study, the major source of the income in the selected study area was the sale of the vegetable. In comparison with non-vegetable producers, vegetable producers have better income in the sampled study area. Out of the independent variables, marital status, age of the respondents, educational level, gender of the household head, productive or active age group in numbers (15- 65), total land size in hectare, fertility of the farmland, number of the livestock (oxen), off-farm activity, access to credit, and family size have significant effect on the participation of the farmers to produce vegetable in the selected study area. Out of the independent variables, fertility of the farmland (soil fertility), access to the market, off-farm activity, and access to the transport have significant effect on the households income in the selected study area where as number of the livestock (oxen) has insignificant effect on the households income in the selected study area. Finally, based on both descriptive and econometric results,improving rural farm households' service and livestock sector, access to credit services are likely to enhance participation in small-scale vegetable production schemes thereby improve small holder rural farmhouseholds total annual income.*

**Keywords:** Determinants, Smallholder Farmers, Participation, Vegetable Production, Household Income.

# **RANGELAND DEGRADATION AND REHABILITATION TECHNIQUES AMONG PASTORALIST COMMUNITIES IN YABELLO WOREDA, BORENA ZONE, ETHIOPIA**

**BY: IRKO FEYISA**

**ADVISOR: KOYACHEW. E. (PH.D)**

## **ABSTRACT**

*Ethiopia is one of the most severely affected countries in the Eastern Africa particularly in rangeland degradation which resulted in decline in productivity and qualities of pastoral range resources, loss of bio-diversity and suffering of the people and animals in chronic food shortage. The main objective of this study was to assess rangeland degradation and rehabilitation techniques among pastoralists community in the Yabello woreda. The survey study designed to conduct mixed approach used to gather data .This study has used purposefully sampling procedures to select the study samples, followed by simple random procedures in selecting the household surveyed and stratified sampling procedures to select head of household interviewed from the selected household. This can be done with two principal stage of sampling process. The first stage was completed during first proposal written, which resulted to construct the theoretical sampling process of second stage. Based the data obtained from districts office (Yabello Rural Pastoralist Office of BZ 2015), there were 18 PAs'in woreda of study areas. Of those, two PAs' were selected by using purposefully sampling method, where rangeland degradation is high and the problem of food insecurity observed. 192 HH heads were surveyed within the selected two PAs' in order to gathering data for the study. Primary data had been collected through questionnaire, key interview, and focus group discussion while the secondary one was from different written and documented sources. Having analyzing the collected data through the tables and figures the researcher had arrived. The result of investigation showed that rangeland of study area was highly degraded. Bush encroachment (30.56%), lack of commitment at individual level, drought and organizations in range resources management were some of the prevailing causes of rangeland degradation in the woreda. Moreover Increase in human and cattle population presser which increases a demand on the range resources use and lacks of alternative sources of resource use and land ownership, incensement in crop cultivation which is a newly emerging system in the area are the major causes for range resources degradation in the area. Effects of rangeland degradation which influences pastoral community was clearly observed in the study area. The recommendation of this study that there is a need to mobilizing pastoralist community, diversifying the pastoral community; reduce the population growth and livestock pressure and rules and regulation governing range resource management should be written and policy must attention to minimize rangeland degradation among pastoralist community.*

**Key words:** causes; impacts; rangeland degradation, rehabilitation techniques.

# **DETERMINANTS OF YOUTH UNEMPLOYMENT AND ITS COPING STRATEGIES IN WOLAITA SODO TOWN, SOUTHERN ETHIOPIA**

**BY: JAGANA AYZA ANJULO**

**ADVISOR: FELEKE YEHUWALASHET (PHD)**

## **ABSTRACT**

*Youth unemployment is one of the critical socio-economic problems facing Ethiopia. The intensity of the problem is high in urban areas in general, Wolaita Sodo Town in particular where youth face serious difficulty in getting employment. Various studies indicated the level of youth unemployment. However, little is known about the factors aggravating youth unemployment and its coping strategies in the study area. In light of this problem, this study was conducted with an objective of investigating the determinants of youth unemployment and its coping strategies in Wolaita Sodo town. To achieve the objective of the study, Cross-sectional design and both qualitative and quantitative research methods were employed. Primary data were collected from 362 youths. The samples were selected by using multistage sampling techniques and the data analyzed by using cross-tabulation, frequency, percentages, chi-square analysis and binary logistic regression model used by computing the data on SPSS version 20. Data was collected using questionnaire, interview and focus group discussion. The chi square test analysis showed that females and non-married were found unemployed. Youth who had secondary and below educational level, no social network, no access to business advisory services, and those who prefer government paid employment were also found unemployed in the study area. The binary logistic regression model analysis showed that age, marital status, education, job preferences and access to business advisory services were significantly determine youth unemployment in Wolaita Sodo town. Sex, household income source, and social network were found insignificantly related to youth unemployment. Concerning to youths coping strategies, the finding of the study showed that youths in the study area engaged in some socially unacceptable behaviors in coping with unemployment situation. Therefore, efforts should be made to reduce the level of unemployment by increasing job opportunity for youths, improving youth attitudes towards job in the formal sector, encouraging youth to advance their education, and guiding youths to choose good coping strategies were the forwarded recommendations.*

**Key Words: Coping strategies, Employment, Unemployment, Youth**

**PRACTICES AND CHALLENGES OF CLIMATE CHANGE  
ADAPTATION STRATEGIES OF SMALLHOLDER FARMERS IN  
CASE OF DAMOT WOYDE WOREDA WOLAITA ZONE SOUTH  
ETHIOPIA**

**BY: MESAY JUTA**

**ADVISOR: SIMEON E (PHD)**

**ABSTRACT**

*This study had intended to accomplish own objectives which were finding out major practices being carried out by small holder farmer household heads, identifying major factors affecting the practices as well as effectiveness of the practices. Accordingly, so as to accomplish such objectives, the study had employed descriptive research design together with both quantitative techniques with data type and data analysis method. Consequently, it have been able to found out that the practice of climate change adaptation strategies implementation had been challenged by different factors such as small holder farmer house hold heads, age, sex and educational level as well as households land holding size and livestock and also market link, extension service together with off-farm activities. Hence, it has been forwarded that all concerned stakeholders needs to support the climate change adaptation strategies practice of small holder farmer households in every possible way. So as to had accomplished them, qualitative and quantitative approach, both probability and non-probability sampling method as well as questionnaire, interview, focus group discussion and case study were used to collect data. Further, the study had employed appropriate data analysis method of descriptive and software. Accordingly, it have been found out that smallholder farmer households engaged on climate change adaptation strategy being awared from kebele officials and agricultural development agents and practicing harvesting rain water, grew and fed improved feeder for their livestock, use drought resistant quality seed and breed crop and livestock. Meanwhile, the practices of climate change adaptation strategy by smallholder farmer house hold in the study area were facing various challenges including financial constraints to buy quality seed and breed, lack of technical support and lack of various inputs needed for the practice of the climate change adaptation strategy.*

**Key words** = climate change, adaptation strategy, household, smallholder farmer.

# **CAUSES OF RAPID POPULATION GROWTH AND ITS CONSEQUENCE ON SOCIO ECONOMIC AFFAIRS: THE CASE OF WOLAITA SODO TOWN, SOUTH ETHIOPIA**

**BY: SOLOMON HAMELO**

**ADVISOR: DENEKE DANA (PHD)**

## **ABSTRACT**

*This study focused on causes of rapid population growth and its consequence on socioeconomic affairs: the case of Wolaita Sodo Town. The objective of the study was to assess causes of rapid population growth and its consequence on socio-economic activities of Wolaita Sodo Town. Cross sectional study design was used. Randomly 187 female headed household respondents were sampled from two Kebele's found on two sub cities of the Town. Both primary and secondary data collection tools were used. Close ended and open ended questionnaires also provided for sample respondents, key informants and for focus group discussion. To determine trend of population growth, population data of the Town was used, both descriptive and econometric model (binary logistic regression model) were used to determine factors for population increment of the Town and determinant factors affecting household size respectively. The result showed that, the growth rate that was recorded between the year 2009-2010, 2013-2015 and 2008-2009 were 18.7%, 16.4% and 13.2% respectively, it recorded two digits of growth rate, which was very high or beyond normality. But the population growth rate recorded between the years 2011-2013 was low, only 3%. Two major determinant factors that are responsible for rapid population growth of the Town were; massive in migration and increased fertility rate. The average household size of the Town increased from 4.9 in 2007 to 6.5 in 2016. Rapid urban conjugation in the Town became factor for different socio-economic problems. Problems related with shortage on transportation, quality of education, health inflation of goods and services, problem of housing and other socio-economic factors were observed on the town. Action plan and strategies can be developed to increase public understanding of how rapid population growth limits chances for meeting basic needs. The spirit of open communication and empowerment of individual women and men is key to successful solution to many population problems.*

Key words: rapid population growth, determinants, Kebele, household, early marriage

**THE ROLE OF CARBON PRICING AND LOW CARBON TECHNOLOGY POLICY FOR REDUCING CARBON EMISSION, THE CASE OF HUMBO WOREDA WOLAITA ZONE SNNPR, ETHIOPIA**

**BY: MELESE MOLA MEKONNIN**

**ADVISOR: BEFIKADU ESAYAS (PHD)**

**ABSTRACT**

*The study on the role of carbon pricing and low carbon pricing policy for reducing carbon emission the case of humbo woreda had been conducted so to accomplish on objectives which were identifying the role of carbon pricing place in minimizing emissions of carbon, finding out low carbon technology policy's role on reducing carbon emission, indicating affectivity of carbon pricing and low carbon technology policy's implementation and investigating factors that have been challenging carbon pricing in low carbon technology in mitigating the level of carbon emission. To achieve the objectives of the study, descriptive research design and mixed method were employed. Hence, the data were collected through three instruments such as questionnaires, interviews, and group discussion. To achieve the objectives, 149 individuals were participated by using simple random sampling method, data collection tools and data analysis it had been able to identify demographic and socio economic factors were affecting the carbon pricing. In addition it had been identifying that lack of proper support and shortages of inputs were the challenges.*

Key words: Carbon pricing, emission, carbon policy.

# LAND USE/LAND COVER CHANGES AND EMERGING INDICATORS OF UNSUSTAINABILITY IN DAMOTA MOUNTAIN,WOLAITAZONE, SOUTHERN ETHIOPIA.

BY: MEDHIN KUCHE

ADVISOR: BARANA B.(ASS PROF.)

## ABSTRACT

*Land Use/ Land Cover Change (LU/LCC) is one of the major human induced environmental changes. Information on LU/LCC and the forces and processes behind such changes are essential for proper understanding of how land was being used in the past, what type of changes have occurred and are expected in the future. The main objectives of this study have been to asses land-use/land-cover changes and indicators of unsustainability in Damota Mountain. The data for the study were acquired from satellite image of Landsat5TM 1984, Landsat7 ETM+ 2001 and Landsat8 ETM+2018. In addition, field survey data were collected from 150 proportionately selected households from 4 kebeles by using simple random sampling techniques.The field survey using structured questionnaires, focus group discussion, field observation and official document were also conducted. The software such as QGIS version 3.2, ARCGIS 10.3 and ERDAS IMAGINE were used to perform image pre-processing, image classification, accuracy assessment, and Descriptive statistics and SPSS for analysis of socio-economic survey was used. From the present finding, it is clear that the study area is under serious threat of environmental degradation which calls for immediate intervention from all concerned bodies. But if degradation continues at the current rate, with no doubt the Mountain will end up as a barren hill. The overall land use/cover change between the year 1984 and 2018, satellite result revealed that, degraded land, cultivated land and bare soil indicated increment by 0.28%, 23.9% and 8.72% per year respectively. But forest and shrub land showed decrement by -1.71% and -1.55% per year respectively. According to FGD with KI in the study area despite the continuous deforestation and environmental degradation in the area, current actions from concerned bodies are minimal. In the study area the only individually planting tree is eucalyptus with its great ecological controversy. So an immediate introduction of proper land management and tenure systems, population growth control mechanisms, and integrated environmental rehabilitation strategies must be given high priority, at the least to prevent existing potential from further deterioration.*

**Key words:** Degradation, Land use/land cover, Landsat, Damota Mountain, Unsustainability, Satellite image

**ASSESSMENT OF THE CAUSES FOR SHORTAGE OF RESIDENTIAL  
HOUSING AND ITS EFFECTS: THE CASE OF BODITI TOWN,  
WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: BELAYNEH BALTA**

**ADVISOR: CHERNET DAMTE (ASSISTANT PROFESSOR)**

**ABSTRACT**

*It is clear that housing shortage is global, social and economic problem, which calls for immediate solution. The residential housing shortage has observed in developing countries like Ethiopia due to high rate of population growth and increased town ward migration of people. This study assessed the causes for shortage of residential housing and its effects in Boditi town with particular emphasis on the experience of households with the aim of identifying the problems, the causes which aggravate the condition and seeking for its solutions. To achieve objectives, sample households were selected using stratified sampling technique and descriptive survey research design, mixed (sequential exploratory) approach was used. The households filled questionnaire whereas, municipality head, vice and kebele administrators were interviewed, in addition, municipality experts were participated in Focus Group Discussion to provide row data. Tables, frequencies and percentages were used in analyzing the quantitative data. While, data gathered through observation, interviews and Focus Group Discussion were qualitatively analyzed by reflecting and narrating the interviewees' word. The majority (80%) of the study revealed that shortage of residential housing in Boditi town due to shortage of housing finance; in appropriate land lease policy and lack of readiness on the part of housing development workers. The majority of the respondents meaning 75.4% indicated that the supply of residential housing in Boditi town was insufficient. 61.4% of the respondents depicted that low income of households; rapid population growth and inappropriate land lease policy were the main reasons for the insufficiency of residential housing in Boditi town. 92.7% of the households indicated that the problem of residential housing by households is one of the very serious social problems in Boditi Town. The situation is getting worst due to the population growth and rural-urban migration of people from the different woredas and kebeles. The government should increase the provision of low-cost houses in a manner to cater for the demand of large number of people with low-income, who could not afford housing. Boditi town municipality is advisable to allocate enough budgets for housing and it is better to implement land lease policy appropriately and be ready to reduce residential housing shortage in the study area.*

**Key Words: Assessment, Causes, Shortage, Residential housing, Effect**

**IMPACT OF CLIMATE CHANGE ON RURAL LIVELIHOODS AND  
THE ADAPTATION MECHANISMS IN SODO ZURIA WOREDA,  
WOLAITA ZONE, SNNPR**

**BY: ASAMINEW MENGESHA**

**ADIVISOR: KOYACHEW ENIKUWAHONE (PHD)**

**ABSTRACT**

*This study on the title the impact of climate change on rural livelihoods and the adaptation mechanisms in Sodo Zuria Woreda, Wolaita Zone had been conducted to accomplish the objectives including to examine the pattern of rainfall and temperature in the last three decades in the woreda; to explore impact of climate change on livelihood strategies with particular focus on agriculture and water resources, to identify the group of society affected by climate change; to assess the existing adaptation strategies to climate change employed by the households. Hence, the mixed research design were employed both qualitative and quantitative approaches to collect, analyze and interpret data. Probability and non-probability sampling techniques were used to select sample respondents. Interview, semi structure questionnaire and open ended questionnaire were used for data collection and temperature and rainfall data obtained from National Meteorological Agency. Multinomial logistic regression analysis was used. The data were analyzed using SPSS version 20. The sampled respondents perceived climate change by various means such as increasing in temperature, unpredictable rainfall and recurrent drought. The main cause of climate change was deforestation. The main adaptation mechanism of climate change commonly used by the community was afforestation. Based on the findings of the study the main impact of climate change in the study area was deforestation, over cultivation, over grazing of the pastoral land. It was the finding of this study that climate change had negatively affected crop production in the area of study. Afforestation, irrigation strategies and awareness creation on the coping mechanism of climate change were recommended for the study area.*

Key words = climate change, adaptation mechanisms, rural livelihood, impact, adaptatio

# **DOMESTIC USE OF YOSHA GROUND WATER AND ITS DETERMINANT, INBOLOSORE WOREDA, SOUTHERN ETHIOPIA.**

**BY: MATHEWOS FALKA**

**ADVISOR: CHERNET DAMTE (ASS.PROF)**

## **ABSTRACT**

*The study considered to the domestic use of Yosha ground water and its determinants in rural areas. Yosha ground water source is high and no seasonal fluctuation through the all year and potential becomes good. Resultantly, the inadequate supply on household consumption of Yosha ground water sources and unevenly distributed among of the consumption on rural kebele of Gurumo koisha. This study was assumed to analyze to extent of considering, status, determinants and perception, practices, and demand for consumption of Yosha water. The status used to measuring tools like, percent, frequency, mean and standard division. And determinants used to Binary Logistic and perception used to five liker scale such as strongly agree, agree neutral, strongly disagree and disagree. The study further expounded household getting free without any Payment to supply Yosha ground water. We also analyzed households' water use performances as a function of water supply accessibility by openly estimating domestic water need to all Gurumo koisha population use equally. Primary data was collected from random sample which means 280 s which consist 187(66.8%) HH members of female and 93(33.2%) HH members of male from kebele of Gurumokoisha. Also in the determinants of Yosha ground water leads to not as much consumed as potentially in rural area. Summary of Findings Based on empirical suggestion, attitudes and theories highlighted in the literature and advance reasons that support the findings underlying the problem under consideration. So the major outcomes of the study are carefully discussed as follow. Remuneration of water, Socio-economic factors & Distance water source and households consumers and recommendations are only of the inflexible of household water supply management is its regular disturbance. Thus, in order to solve the absence of sustainable water supply problems. There is no need any payment to consumption of Yosha ground water because most of the respondents suggest that this yosha ground water provide inadequate water service. Large number of people not consumed this consumption of Yosha ground water. Therefore the consumption of yosha ground water source supply make good network with the consumers of Gurumo koisha kebele. This all responded from 280 house hold respondents through systematic sampling and data collected from both primary and secondary and having analyzed the collective data. The researcher reached at domestic use of Yosha ground water consumption and its determinants in rural area of Gurumo koisha kebele.*

**Keywords:** -water consumption, Status of ground water, Binary logistic and Liker Scale

# **FACTORS AFFECTING YOUTH EMPLOYMENT THE CASE OF BOREDA WOREDA GAMO ZONE, ETHIOPIA**

**BY: MERKEB LAKEW CHEMO**

**ADVISOR: SIMEON EMANE (PHD)**

## **ABSTRACT**

*The main purpose of the study was to assess the factors that affecting youth employment in the case of Boreda Woreda Gamo Zone, SNNPR. A primary data was collected by using descriptive statistics method was employed to collect data. Questionnaire/interview schedule, structured and semi structured interviews from sampled respondents, FGD (Focus Group Discussion), key informants interview were implemented to collect data and analyzed. The study involved 142 sample youth from three sample Kebles out of 29, which were employed in different government sector and NGO's and even private organizations. Based on the objectives of a given study and nature of data Descriptive statistics analysis requires different approaches. In this study, to analyze quantitative data, like mean, max, pay chart, and bar graph is applied. In addition; Statistical Package for Social Sciences (SPSS) version 20 is used for the analysis of quantitative data. Also the data was qualitatively analyzed through explanation and description. The result of the study shows that; there were youth's and parent's which were benefited by work opportunities' of youth's in the woreda. Having awareness for parent on the necessity of having job opportunities for youth, learning by mother tongue language, education policy and strategy, work opportunity creation program, having accesses to information about job opportunities, accesses to loan to create their personal and cooperative work opportunities, the existence of loan providing financial institutions, youths motivation to create and use existing opportunities, positive attitudes to entrepreneurship and youths perception were to be key drivers for the effects of youth employment in study area. Therefore, the awareness raising, human and material resource development, Continuous Capacity building, creating conducive skill gap filling trainings, developing positive attitude and sense of owner ship of youth to keep their opportunity and effective supportive follow up and monitoring, allocating budget in all sector with contingency budget for new graduating youth employment and support at all level is important. The community mobilization and stockholders involvement during implementation of youth related issues is also needs critical emphasis. The research analysis and generalized result showed that the factors affecting youth employment at study area on the basis of the major research findings. However, the study results showed that the strategies to enhance youth employment at study area that all stakeholders and general community should; create awareness and common understanding with in the society about the youth employment strategy of community mobilization and communication should be established. The political leaders and other stockholders should be also informed about the youth employment in every aspect of countries policy. In collaboration with Micro finance institution, sport and youth, academic institutions, model youth and forums as well as community dialogue should be arranged.*

# **EVALUATION OF ENVIRONMENTAL IMPACT OF CARBON SEQUESTRATION PROJECT: THE CASE OF HUMBO COMMUNITY ASSISTED NATURAL REGENERATION PROJECT; SOUTHERN ETHIOPIA**

**BY: GEBRE TEKA  
ADVISOR: BARANA B. (ASSIST. PROFESSOR)**

## **ABSTRACT**

*This study was aimed to evaluate environmental impact of carbon sequestration project in the case of Humbo woreda. The primary data were collected from randomly selected 95 households of the three cooperatives through questionnaire with likert 5 scales and secondary data from cooperatives. A triangulation of key informant interviews and focus group discussions were employed to gather the required data. Data was analyzed by employing descriptive and inferential statistics. Findings of the study revealed that carbon sequestration project has enhanced ecosystem, increased biodiversity level, reduced soils erosion and landslides and emergence of new plant species. Moreover, the study depicted that carbon projects typically contribute to the development of knowledge, skills, and capacity of individuals through trainings in forest project management. The study also shown that individuals who were male headed, with younger and productive age, educated and well acquainted with environmental knowledge are more likely to participate in the project management than their counterparts. Based on the results of binary logistic regression model, distance from residence to forest is a variable that has a significantly negative effect on forest development and management. This implies that communities in close proximity to the forest can better participate in forest development and management due to convenience and effective use of extra time and energy. The findings from the correlation and regression analyses, the highest correlation score of .909 between natural capital (NC) and Human capital (HC) was seen and found highly significant at the 0.01 level ( $p < 0.01$ ). Finally, the study recommends what has to be done in the future to scale-up carbon sequestration projects to maximize rural environmental resource management.*

**Key words: Carbon sequestration, environmental impact, afforestation and reforestation**

# **RURAL HOUSEHOLDS CLIMATE CHANGE PERCEPTION AND ADAPTATION STRATEGIES IN OFA WOREDA, WOLAITA ZONE SNNPR, ETHIOPIA**

**BY: BUSHURO BUYA**

**ADVISOR: TEGEGN HAILU (ASS. PROFESSOR)**

## **ABSTRACT**

*Climate change is projected to have serious environmental, economic and social impacts on ofa woreda rural households whose livelihoods depend largely on rain. To extent of these impacts' dependence largely on perception and the level of adaptation in response to climate change. This study examined the perception of rural households the perception of rural households in ofa woreda on climate change and analyzes adaptation strategies to climate change. One hundred and forty rural households were selected by simple random sampling. Binary logit model, heckman selection model and descriptive statics used to analyze the data. The study result showed that about 68% of the respondents perceived decrease in rainfall, while 100% perceived increase in temperature over the years. The major adaptation strategies identified included terracing, a forestation, rain water harvesting, crop diversification, use of improved crops, income diversification (petty trade, wage laborer), seasonal migration and livestock management (decreasing animal number). Results of logit regression analysis indicated that the respondents age, access to extension and farming experience were the most important factors that positively influence rural households perception and adaptation to climate change. On the other hand, sex of the household head, farmland size, access to market, access to credit have negative influence on rural households' perception and adaptation. The main barriers included sex, lack of money to finance, lack of weather information, and lack of technical knowledge. Most people (68%) perceive long term variability in pattern of rainfall and 100% perceive increasing trend in temperature. Implication policy making will be to make rural households more perceive on cases and effects on climate change through training, improve the status of women to acquire climate change information's and governments should facilitate adaptation by enabling farmers to overcome the barriers reported in this study.*

**Key words: Climate change, Perception, Adaptation, Barriers to adaptation and perception.**

**PARTICIPATORY SOLID WASTE MANAGEMENT: CHALLENGES  
AND PROSPECTS IN THE CASE OF AREKA TOWN,  
WOLAITAZONE, SNNPR, ETHIOPIA**

**BY: KAPITALU KARCHO**

**ADVISOR: PAULOS LUKAS (ASSIST .PROF)**

**ABSTRACT**

*The main aim of this study was to assess the participatory solid waste management challenges and prospects in the study area. A total of 163 respondents, 6 interviewees and field observations were used in the study. In order to achieve the objectives, both primary and secondary sources of data were used. The primary data were collected through questionnaires, interviews and field observations. While the secondary data were extracted from different published and unpublished materials. The analysis of this study was carried out using both qualitative and quantitative techniques. There was very poor and insufficient solid waste management in general and waste handling in particular in the Areka town. Thus the municipality of the Areka town could not be able to provide enough participatory solid waste management practices. Location and distance of community waste containers had also direct impact on solid waste management in which the further the location of the storage space the lower the level of waste management. The municipality of the town was not able to provide adequate solid waste management service because of the factors related to financial constraints, very poor institutional coordination, weak enforcement of rules and regulations, socio-cultural factors and lack of awareness among the community. Thus, it was recommended that to increase awareness of the community, responsible bodies (Government, Community) should pay attention to the issue in order to improve the current poor solid waste management practices in the town.*

**Key words:** solid waste, solid waste composition, solid waste collectors, waste management.

# **RURAL WOMEN'S PARTICIPATION IN NON-FARM INCOME GENERATING ACTIVITIES: THE CASE OF OFA WOREDA, WOLAITA ZONE, ETHIOPIA**

**By: WUBINESH SIMON**

## **ABSTRACT**

*Economic development is not sustainable without the active participation of the women. However, their participation in non-farm income generating economy has not been recognized. Therefore, the objective of this study was intended to identify the level of rural women's participation in non-farm income generating activities in Ofa woreda, Wolaita Zone, Ethiopia. To this end, 138 sample female headed households were selected randomly by using stratified random sampling method. Then, questionnaire, key informant interviews and FGD were used to collect data to achieve the objectives of the study. Descriptive statistics such as frequency, percentage,  $X^2$  test and F test were used to identify the level of women's participation in non-farm income generating activities while Ordinal logistic regression was used to explore factors that determine women's participation in non-farm income generating activities and ranking and triangulations was employed to assess the challenges of women's participation in non-farm income generating activities. The results of study revealed that 60.86% of the women were under low participation category, 29.71 % were under medium level of participation category and 9.43 % of the women were under high participation category. Ordinal logistic regression result revealed that family size, training access and access of training were positively influencing the participation of women in non-farm income generating activities while dependency ratio and land size were negatively influencing the participation of women in non-farm activities negatively at 5% significant level. Finally, the FGD and in depth interview revealed that lack of market access, shortage of financial capital and lack of training were top ranked constraints/challenges that hinder the participation of women in Non-farm income generating activities. Therefore, cooperative intervention of government and non-governmental organizations were required to build the capacity of women's income through providing credit access, frequent training and institutionalizing the non-farm enterprises.*

**Key words:** Non-farm income, Factors and Women Participation

# **DETERMINANTS OF HOUSEHOLD FOOD INSECURITY AND COPING STRATEGIES: THE CASE OF DAMOT WOYDE WOREDA, WOLAITA ZONE, SNNPR, ETHIOPIA.**

**BY: ENDRIAS HAILE**

**ADVISOR: TELEGN HAILU (ASS. PROFESSOR)**

## **ABSTRACT**

*Household food security issues have become the concern of national governments as well as the international community's during the last few decades. Household level food shortage is one of the most important effects of population growth and population dynamics affecting multidimensional social and economic life of household members. This study has attempted to assess household food insecurity and local coping strategies of rural farm households in Damot Woyde Woreda, Wolaita Zone. Data were collected from 178 sample farm households from three Rural Kebele Administration (RKA) using systematic random sampling techniques. Primary data were collected by conducting a household survey. In addition, focus group discussions and key informant interviews were used. Secondary data were collected from various sources. The data were analyzed using binary logistic regression model and descriptive statistics such as mean, minimum and maximum, percentage and frequency distribution. Moreover, and they were used to describe characteristic of food secure and insecure households. In general, Damot Woyde Woreda, suffer from chronic food insecurity. From the total sample households about 83.1 % were food insecure while the rest 16.9% were food secure. The result revealed that factors associated with age of household head, farm size, number of livestock, annual incomes, access to extension services and access to infrastructure are significantly related to household food security. Copings strategies including selling fire wood/charcoal, participation in PSNP, seasonal migration, employment in labor force, selling HH asset, grain reserves, livelihood diversification, intercropping/crop diversification, growing improved crop varieties were found to be common practices prevailed in the region. Thus, distribution of moisture stress tolerant crop varieties and improved technologies that increase the productivity of land and livestock should be given higher priority to enhance sustainable food security in the region. It is also crucial to promote intensive agriculture and non-farm activities, as well as strengthening credit institutions to boost agricultural production and income, and thereby attain improved food security.*

**Keywords:** Food security, food insecurity, changing mechanism, determinants of food security

# **ASSESSMENT THE EFFECTIVENESS OF MICRO FINANCE INSTITUTIONS IN EXTENDING SERVICES TO THE POOR IN WOLAITA SODO TOWN, WOLAITA ZONE, SNNPR, ETHIOPIA**

**BY: WONDIMU ELIAS**

**ADVISOR: TEGEGN HAILU (ASS. PROFESSOR)**

## **ABSTRACT**

*In extending services to poor in terms of credit and saving delivery, productivity and effective, profitability, portfolio quality, socio-economic conditions of the population development and their feedback on the services provision which are indicators of outreach and sustainability. The main objective of this study was to find out whether the provision of microfinance services of MFIs in Wolaita sodo Omo microfinance and Vision fund microfinance institution has savings and credit, Poverty eradication and Community empowerment in poverty reduction and the living conditions of poor. My main goal was not only to find out the effectiveness services of microfinance in Wolaita sodo town, but also to find out that how this service reduce poverty and helps poor people to improve their living standards as: income, savings, business running etc. By doing so, I believe that it will give me an upper hand, especially when it comes to finding answers to the questions raised in the problem statement. Primary data were collected through close-ended structured questionnaire from clients and focus discussion with the manager of each institution. Secondary data were gathered from different published and unpublished relevant materials. The study mainly applied analytical approaches such as frequencies, percentages, correlation and multi regression Model. The findings of the study indicated that the Omo and Vision fund micro financing scheme has improved the clients' services, Construction of house and creation of employment.*

**Key words:** effectiveness, poor, microfinance, standard of living, poverty reduction.

# **AN ASSESSMENT OF DOMESTIC WATER SUPPLY ON DISTRIBUTION IN YAYU TOWN, ILU ABBA BOR ZONE, ETHIOPIA**

**BY: ADDISU YADESA**

**ADVISOR: DENEKE D. (PHD)**

## **ABSTRACT**

*Water is one of the basic necessities for human survival and socio-economic development. Access to safe water is a universal need and basic human right. Safe and adequate quantity of drinking water is an essential input for life. Yayu town has been experiencing the problem of potable water supply in adequate quantity and quality. The thesis paper focused on the potable water shortage of Yayu town Ilu Abba Bor zone Oromiya Regional state. The main objectives of the study were to assess shortage of potable water on household use in Yayu town. In order to carry out the stated objectives of the research, the data were collected from 197 sample house hold heads using random sampling technique. Both primary and secondary data sources were used in this study. For primary data collection, household surveys, key informant interview, and personal observation were used as tools to collect the necessary information. The survey result revealed that the town water supply could not fulfill consumer demand for water. Water supply from YTWSO is only 1/3 of the demand. The factors that caused the problems are population explosion, poor water maintenance, low water pressure, topography, inadequate finance, lack of technical skill and material resource constraints. The study also indicates that water distribution in the town is not equal. Central parts following the main road get more water supply while the peripheral areas remain without water supply and exposed to buy water from vendors at high price. The impacts of the water scarcity have brought on households are the economic and health impacts. Time wastage and conflict are also observed. The recommended major coping strategies for the challenges are drilling additional water sources, family planning, active involvement of the communities, effective financial management and staffing organizational structure with skilled man power.*

**Key words:** Potable water, Water shortage, Impacts of water, Community

Participation, Water consumption.

# **IMPACTS OF RESETTLEMENT SCHEMES ON LIVELIHOOD OF RESETTLED COMMUNITY IN GUMGUMUTA VILLAGE, SOUTHERN NATIONS, NATIONALITY AND PEOPLES OF ETHIOPIA**

**BY: SHIFERAW NASSA**

**ADVISOR: ALEMAYEHU ADUGNA (PHD)**

## **ABSTRACT**

*This study was tried to assess impact of resettlement program on the livelihood of resettlers in Boreda woreda the case of Gumgumutakebele in Gamo Zone, SNNPR. One hundred sixty one (100%) household heads were addressed for interview and questionnaires were filled out by agricultural office experts. In addition, focus group discussion with representatives of resettlers has been employed directly by researcher to collect strengthening data of the study. The study results showed that the attempt to find information about the cause and impact of resettlement program was made with the great number of settlers before the implementation of the program. Their movement to the new area was voluntarily based. Concerning the livelihood status of resettlers, the study showed that the resettlement program has positively contributed to the social, financial, human and natural capitals of resettlers' livelihood assets. However, the current and physical capitals of livelihood assets were not satisfied status due to less infrastructure and social service facilities like schools, health services, safe drinking water, veterinary services, market and rural roads in the resettlement area. The agricultural activities of respondent households were completely dependent upon rainfall, which was highly influenced by seasonal variability. The on-farm and non-farm activities such as crop production, livestock trade, daily labor and weaving have been used as sources of income generation to household heads to promote their livelihood assets and to cope with unfavorable conditions. However, the study results showed that the activities of livelihood strategies to cope vulnerability should take care for environmental management for sustainable livelihood achievements of the resettlers. Thus, the combined actions of all concerned bodies are the remedial solutions to change the problems related with resettlement and to enhance the diversification of income sources of resettlers to build their livelihood assets in sustainable manner.*

**ASSESSMENT OF THE EFFECTIVENESS OF CARBON TRADING  
PROJECT ON RURAL MICRO-ENTERPRISES DEVELOPMENT IN  
THE CASE OF HUMBO WOREDA AFFORESTATION AND  
REFORESTATION PROJECT, WOLAITA ZONE , SNNPR, ETHIOPIA**

**BY: ALEMU ASELE  
ADVISOR: CHERNET DAMTE (ASSIST. PROFESSOR)**

**ABSTRACT**

*Carbon trading is a new market based approach for climate change mitigation that generates carbon revenue. Afforestation and reforestation is one of the mitigation projects that allow rural community participation and provide benefits of carbon in Ethiopia. This study was conducted to assess the effectiveness of carbon trading project on rural micro enterprise development in the case of Humbo woreda, Abela Longena and Bossa Wanche kebeles. The primary data that were collected from randomly selected 318 households of the two cooperatives through questionnaire with likert 5 scales and secondary data from cooperatives. A triangulation of key informant interviews and focus group discussions were employed to gather the required data. Data were analyzed by descriptive and statistical or inferential method. Findings of the study revealed that carbon trading has contribution to the promotion of MEs through alleviating loan constraints and the project filled financial gap of the cooperatives and enabled them to initiate various community development projects. Moreover, the study depicted that social network and collective actions have developed. However, impact in business information and practice exchange was limited. The findings from the correlation and regression analyses, the highest correlation score of .909 between Financial capital (FC) and Human capital (HC) was seen and found highly significant at the 0.01 level ( $p < 0.01$ ). Finally, the study recommended what has to be done in the future to scale-up carbon trade projects to maximize rural micro enterprise development. Key words: Carbon trading, micro-enterprises, afforestation and reforestation*

### **4.3. Department of Sociology**

# **A STUDY ON STREET VENDORS ACTIVITY IN WOLAITA SODO CITY:THE CASE OF MEHAL SUB-CITY.**

**BY:-BEREKET ENDRIAS**

**ADVISOR: TAMIRAT MENGISTU (ASST.PROFESSOR OF SOCIOLOGY)**

## **ABSTRACT**

*The title of this study is "A Studyon Street Vendors activity in Wolaita Sodo:The case of Mehal Sub-City". The objectives of the study was examining and analysing the living style of street vendors, the challenges they face and the contributions of street vendors activity to their livelihood security in Wolaita Sodo.Among various research methodologies, in order to achieve the intended objectives of the study,a mixed approach, which is both qualitative and quantitative techniques, were used for data collection. A survey and in depth interviews with street vendors customers and officials were undertaken, to generate data from deferent categories of responses. In this study, two main reasons that led street vendors to undertake the informal business like street vending were poverty and unemployment. They face four major challenging factors during the operation of their task. They are financial constraints, problems of work environment, problems of social security and environmental problem. Interestingly, according to this study, street vendors create an enabling environment to improve one's livelihoods and to support the family. In addition, they were found to offer low priced commodities for the poorer segment of the society. Nevertheless, street vending was also found to create traffic congestions and hinder free movement of the pedestrians. Besides they were attributed to weaken city's economy because vendors do not pay trading tax. But, there are still conflict between authorities and vendors over licensing, taxation and encroachment of public places and pavements. In spite of its crucial role for providing employment and livelihoods to both urban and rural poor, its economic importance was rarely recognized either in national poverty reduction strategies or in city governance initiatives. Therefore, appropriately addressing the practical reality of the work process and the role of vendors in the urban economy, and effectively protect vendors basic rights to livelihood and property. Providing free-space, regulating the street vendors by issuing license, providing training and credit, developing small-scale agro-industries in rural areas, including permanent markets and working places in the master plan of a city were recommended.*

**Key words: Economic Informality, Informal Sector, Livelihood, Street Vendor**

# **MATERNAL HEALTH CARE SERVICE SEEKING BEHAVIOR AMONG WOMEN OF REPRODUCTIVE AGE IN RURAL AREAS OF DAMOT WOYDE WOREDA, SOUTHERN ETHIOPIA**

**BY: TESFAHUN LEMA BARATA**

**ADVISOR: YARED PAULOS (ASS. PROFESSOR OF SOCIOLOGY)**

## **ABSTRACT**

*Maternal health care services (MHCS) are among the health interventions to reduce maternal and infant morbidity and mortality. There are many factors that can affect the health of mothers during childbearing age which include the availability and accessibility of maternal health care services, social influence, Attitude and practice of women. The main aim of this study was to assess factors that affect maternal health care service seeking behavior in rural areas of Damot Woyde Woreda, Southern Ethiopia. A qualitative study method was employed to address those factors which quantitatively not addressed in the previous study. Primary data were collected data by using qualitative data collection methods. FGD, in-depth interviews and key informant interviews were the methods employed. A purposive sampling technique was used to recruit study participants: totally 8 FGD session was held, 32 respondents were taken and 10 key informants were employed. Data were analyzed using thematic analysis. It is evident from the findings that women know and appreciate the benefits of attending the health facility though sometimes they find it difficult to access maternal health care services due to the socio economic, cultural, and attitudinal and other service related factors. The service related factors included negative attitude to health care provider, lack of good communication with health care provider, inadequate health education and shortage of medical equipment's and medicine at health facility. Participants appreciated some aspect of maternal care rendered to them but suggested improvements in those areas they felt lacking in quality. Special attention on this area included lack of routine delivery care at health center, lack of maternity waiting home at the health center and inadequate supplies in the maternity ward. Disparities in maternal health care service seeking behavior between the women have been evident from socio-economic and service delivery aspects, that requiring urgent attention to health sector transformation plan (HSTP) or sustainable development goal (SDG). Improving the quality of maternal health care service in public health facilities which are the main provider of health care services to the majority of the rural population is urgent. Community education should be strengthened and health workers should provide comprehensive, respectful and non-judgmental care that is responsive to women's needs. In order to verify and contextualize the study results, additional research on a wider scale is recommended.*

**Key Words:** Maternal health, Health seeking behavior, reproductive age women, qualitative research and wolaita zone

# **FACTORS CONTRIBUTING TO HIGH FERTILITY AMONG THE GEDEO COMMUNITY IN MOKONISA KEBELE, GEDEO ZONE, SOUTHERN ETHIOPIA**

**BY: BOGALE HALCHAYE**

**ADVISOR: FISTUM MESERET (ASS. PROFESSOR)**

## **ABSTRACT**

*Fertility patterns are different between countries and over time. Many different factors can affect the fertility rate. Some are economic while some are social. This study aimed at investigating the factors contributing to high fertility in rural areas of the Wonago woreda in Gedeo Zone. The study used a qualitative research design which enables the researcher to interpret phenomena in terms of the meanings people bring to them. So, to obtain adequate information three kinds of data collection methods were used. These data collection methods were in-depth interviews, key informant interview and focus group discussions. Sample size is 30; Sampling design was non-probability sampling, among non-probability sampling purposive sampling chosen. The data collected were analyzed using thematic analysis. The results of the study showed that the socio-cultural factors such as values and beliefs of community for having large number of children, gender relationship towards fertility, and community perceptions towards modern contraceptives/birth control were the major factors and also responsible for high fertility in the study area. Because of this, Zonal and Woreda government bodies and other concerned bodies should have planned to reduce the desire to having a large family size through continuing discussion that aim to raise community awareness.*

**Key words:** family planning, high fertility, perception, Gedeo, Wonago,

# **ASSESSMENT ON PREVALENCE OF MOTORBIKE RELATED ACCIDENTS AND CHALLENGES OF ITS PREVENTION IN THE CASE OF WOLAITA SODO TOWN, SOUTHERN ETHIOPIA**

**BY: ALEMAYEHU MAMO**

**ADVISOR: ABEBAYEHU TORA (PH.D.)**

## **ABSTRACT**

*Motorbike accidents comprise a major but neglected emerging public health problem in developing countries (Ethiopia being among them) and contribute significantly to the overall road traffic injuries. Commercial motorcycling has become a popular mode of transport in both rural and urban areas of Wolaita zone. However, motorbike accidents which cause injuries and death have not get the adequate attention it deserve as the situation is worsening in the study area. The general objective of the study was to examine the risk factors, prevalence's, prevention methods and its challenges of motorbike accidents in Sodo city administration. Study Design and method of the research was laid on mainly descriptive cross sectional research design and used both qualitative and quantitative methods in the methodology of mixed approach. Primary and secondary sources of information were employed for this study. The major tools utilized were key informants interview, focus group discussion, document survey and self administered questionnaire. Quantitatively a sample size of one hundred sixty eight respondents was involved and five years motorbike accident rate of prevalence report document examined. Qualitatively; twenty seven different community members namely; nine community elders, nine kebele representatives and nine crime prevention police officers, participated in focus group discussion. Two drivers training institution instructors, two road and transport development department officers, four traffic police senior officers interviewed and non participant observation was employed. Data collected were descriptively analyzed using cross-tabulation, graphs, frequency and percentage. Results and data of the study have identified different demographic, environmental, technical and human factors as main causes of motorbike accident. The results also shows that most commercial motorbike riders exposed to accident because of lack of formal training of driving, (driving without license), over-speed driving (High speed), alcohol addiction, unsafe infrastructure and road networks (poor road), negligence of respecting rules and regulations, negligent to use helmet, lack of road signs and symbols have also been evidenced to be associated to motorcycle related accidents and prevention challenges. Finally, all concerned stakeholders should work collaboratively to address the emerging problem of motorbike accident in Wolaita Sodo city.*

**Key words:** motorbike accident, commercial motorcycling, risk factors, prevention mechanisms

# **PHYSICIAN-PATIENT INTERACTION AND PATIENT SATISFACTION AMONG DIABETES MELLITUS OUT PATIENTS IN THE CONTEXT OF PUBLIC AND PRIVATE HOSPITALS OF WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: WOINSHET SOLOMON**

**ADVISOR: YARED PAULOS (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*A physician-patient interaction which is an important determinant factor of patient satisfaction in the medical care is rarely studied in public and private hospitals of Wolaita Zone. This study was with the aim of examining the nature of physician-patient interaction, identifying interpersonal, organizational, cultural context and socio-demographic factors affecting physician-patient interaction and estimating patient satisfaction in the context of public and private hospitals. Furthermore, the associations of levels of patient satisfaction with factors during interaction were examined based on an ecological model among diabetes patients in the study area. Cross-sectional mixed (quantitative and qualitative) methods were used in the studied area. A total of 364 patients were systematically selected and interviewed with a structured questionnaire during survey considering demographic characteristics of patients. Data storage and analysis were carried out using (SPSS version 20.0 & STATA version 12). Bivariate analyses and multinomial logistic regression model were used to generate the quantitative findings. Qualitative data was collected from a total of 12 patients and 12 physicians with in-depth interviews which was selected purposely from a list of diabetes outpatient in the selected hospitals. Additionally, the researcher used observation method for qualitative study to determine the nature of physician-patient interaction. Results showed that the overall satisfaction level was high when compared to dissatisfied patients during physician-patient interaction in the studied hospitals. Demographic characteristics of patients such as age, sex, education, occupation, residence, marital status and income level were significantly associated with levels of patient satisfaction. And also interpersonal, organizational and cultural factors during physician-patient interaction were significantly associated with levels of patient satisfaction. Some factors involving physicians' incompetency such as: lack of medical ethics during interaction (dominant conversation, disrespectful, lack of information provision, time spent, less serious communicative strategies and use of medical terms), cultural factor (lack of physicians familiarity with local language of patients) and organizational factors (lack of health care insurance, waiting time delays, lack of health care facilities and unaffordability of health care fees) were related to patient dissatisfaction. These findings suggest that health care institutions should consider professionally training to enhance the interpersonal characteristics of both physicians and patients and provide essential health care services in order to improve physician-patient interaction and patient satisfaction in public and private hospitals of Wolaita Zone.*

**Key words:** Physician-patient interaction, Patient satisfaction, Diabetes, Interpersonal.

# **AN ASSESSMENT OF FACTORS AFFECTING THE IMPLEMENTATION OF HEALTH EXTENSION PROGRAM IN DAMOT GALE WOREDA, WOLAITA ZONE SOUTHERN, ETHIOPIA**

**BY: MESFIN SITOTAW**

**ADVISOR: YARED PAULOS (ASS. PROFESSOR OF SOCIOLOGY)**

## **ABSTRACT**

*Ethiopia has launched HEP in 2004 to improve the health status of masses in the country. The implementation of the program however, has been affected by several factors. This study was carried out in Damot Gale woreda of Wolaita zone, SNNPR with the main objective of investigating the factors that affect HEP implementation in the study areas. In order to attain this objective the study employed descriptive research and specifically the survey design. For this reason, a cross-sectional survey design used and the household survey data collected from 352 sample households. Quantitative data were analyzed using descriptive statistics like percentages and frequency distributions while qualitative data were analyzed thematically. The result of the logistic regression model revealed that out of 9 variables included in the model, 6 explanatory variables were found to be significant at 1percent, 5percent and 10 percent level. Accordingly, household head sex, age, marital status, education level, income and access to health extension workers were found to have positive association with implementation of HEP and statistically significant. Meanwhile family size, distance from the health post and indigenous practices were found out to have strong negative association with the implementation of HEP and statistically significant up to less than 10 percent level of significance. The findings of the study indicated that HEP has been implemented but affected by social, economic, and cultural factors. Illiteracy, gender inequality, lack of resources, lack of acceptance of delivery at HPs frustrated the full implementation of HEP. It can thus be suggested that effective mass awareness, revision of HEP contents to meet the lifestyle are needed to successfully implement HEP. It is also necessary to provide enough supplies in the HPs, continuous trainings for HEWs and VCHWs, and ensure sustainable gender equality and primary education.*

**Key words: Health extension program, health post, health extension worker, indigenous Practices, Wolaita Zone, qualitative and quantitative research**

**THE ROLE OF YOUTH CENTER SERVICES IN ENHANCING YOUTH'S WELL-BEING: MILLENNIUM YOUTH CENTER AT BODITI TOWN IN WOLAITA ZONE, SOUTHERN ETHIOPIA:**

**BY: - MIHRETU DANA**

**ADVISOR: - MULUKEN TAMIRAT (ASS. PROF. OF SOCIOLOGY)**

**ABSTRACT**

*The study was concerned with an assessing the role of youth center services in enhancing youth's wellbeing: Wolaita Zone, Boditi town, Millennium Youth Center. Having the general objective of assessing the role of youth center services in enhancing youth's wellbeing, specifically description of services delivered in the youth center, the socio-economic effects of youth center services, the perception of youths towards youth center services and the problems that youth center encounter were assessed. The study employed both quantitative and qualitative methods of data collection and analysis. The quantitative method of data collection employed survey method and the qualitative method of data collection employed in-depth interview, key informant interview, FGD, and observation methods. Using the methods, primary data were collected from sample members of the youths, centrally placed officials from women, children and youth offices and managerial bodies of the youth center. Simple random and purposive sampling techniques were employed so as to select sample respondents of the study. The finding of the study revealed that there are sixteen major services were delivered in the youth center to enhance youth's wellbeing. In delivering these services, the youth center enhanced youth's social, economical, health, and access to information and education. The finding also assessed the perception of youth's toward youth center services that revealed as youths have positive attitude towards the services provided. Despite the benefits it yielded to youths, the youth center encountered various problems that hampered the potential benefit of youths, which calls for the due attention of concerned bodies.*

# **ASSESSING FAMILIES PERCEPTION AND LEVEL OF AWARENESS ON CHILD TRAFFICKING IN DAMOT WOYDE WOREDA, WOLAITA ZONE**

**BY: TEGEGN TADESSE**

**ADVISOR: TAMIRAT MENGISTU (ASS.T PROF )**

## **ABSTRACT**

*The title of the study was assessing families' perception and level of awareness on child trafficking in Damot woyde woreda, Wolaita zone. The problem of trafficked children becomes the recent issue since the challenges of children was increased risk. Many of children in the geographical areas were easily vulnerable to child abuses and exploitation. The design employed both qualitative and quantitative method was used with descriptive cross-sectional type of design. The qualitative data was organized, analyzed and processed by using thematic analyses and the quantitative data was analyzed by cross tabulation with table, frequency and percentage. To collect the data through using questionnaires, in depth interviews; FGD and documentary reviews were employed by the researcher. The researcher used purposive and snowball sampling technique to determine the sample size. The researcher used 203 sample respondents of household heads from three study kebeles through simple random sampling technique, 9 participants for in-depth interview, 6 participants of key informants from community elders and 14 children for FGD. The children were formed in two groups; both groups contain seven children with independent of male children group and the female children group. The data were analyzed and interpreted by using percentage and frequency distribution table. The finding showed that families' level of awareness on child trafficking becomes very low. Parents were pressurized their children to be the survivors of trafficking and they perceived their children as source of income for their poverty survival when children victimized in trafficking; as resulted; children were being exposed to psychological abuse, physical abuse, mental abuses and sexual abuses. Many of children were didn't clearly differentiate various forms of child abuses. The victims of trafficking were also exposed to street prostitution, forced sex, contracting sexually transmitted diseases, unwanted pregnancy, inadequate housing, fistula, traumatic mental problems, eating and sleeping disorder, behavioral problems, health problems, educational problems, fear as well as shame that they usually exhibit.*

**Key words:** Human Trafficking, Child Trafficking, Human smuggling, Child exploitation

# PARENT-ADOLESCENT COMMUNICATION ON ADOLESCENT'S REPRODUCTIVE HEALTH ISSUES IN SODO TOWN, WOLAITA ZONE

BY: YIFTUSRA WUBE

ADVISOR: MR. AKALEWORK MENGESHA (ASS. PROFESSOR)

## ABSTRACT

**Background:** *Adolescence is the period of young person's life between the age of 10 and 19 years. It is a time that characterized by risk taking and the period of experimentation and engagement of wide range behaviors lead them to risk. During this period physiological, psychological and social changes of adolescents occur which need comprehensive social and parental support. The study assessed parent-adolescent communication on adolescent's reproductive health issues in Sodo Town, Southern Ethiopia.*

**Methods:** *A community based cross-sectional study was conducted among 668 parents of adolescent in sodo town. Multistage random sampling was used to select participants for the quantitative survey. Systematic random sampling method was then used to select the households and household heads (parents). And information saturation was used to determine participants of qualitative part. Quantitative data were collected by pre tested questionnaire and face to face interview. Both bivariable and multivariable logistic regression analysis were done for quantitative data and thematic analysis using open code for qualitative data analysis. Level of statistical significance was declared at p-value less than 0.05.*

**Finding:** *This study revealed that 236 (34.7%) of parents discussed about reproductive health issue with their adolescents within 12 months preceding the survey. Sex AOR: 0.64 [0.44, 0.93], educational level AOR: 0.24 [1.31, 4.33], religion AOR: 0.39 [0.19, 0.82] and knowledge AOR: 0.53 [0.37, 0.76] showed statistical association with parent adolescent communication.*

**Conclusion:** *low number of parents discussed with their adolescents regarding sexual and reproductive health issues. Sex, educational level, religion and knowledge of parent determine parent adolescent communication. Strengthening community based intervention to enhance reproductive health of adolescents and establishing parent networks to deal the problem and solve using new strategies is the way forward*

**Key words:** Parent, adolescent, discussion, Sexuality, reproductive health

# **AN ASSESSMENT OF YOUTH UNEMPLOYMENT IN DURAME TOWN ADMINISTRATION**

**BY: BASIMO DEREBE**

**ADVISOR: TAMIRAT MENGISTU ( ASSISTANT PROFESSOR)**

## **ABSTRACT**

*This research was conducted in Durame town administration, to examine the state of youth unemployment. The study was concerned with the causes and consequences of youth unemployment, coping mechanisms of unemployed youths, and government's effort to control youth unemployment. Unemployed youths that graduated from government and private colleges and universities were source of data in this study. Qualitative research design was employed in this research. In-depth Interview, key informant, and focus group discussion are instruments of data collection used in this study. Purposive sampling technique was used to collect data from the informants. Among the research informants, seven youths were engaged in in-depth interview while twelve(6 male and 6 female) youths had taken part in focus group discussion. The study also included two family head of unemployed youth and two experts as the key informants concerning the issue under consideration. Corruption political party membership, skill mismatch, and low quality of graduates are causes of unemployment in the study area. The finding of the study indicated that unemployed youth faced psychological, social and economic hardship. The family of unemployed youth also are stressed economically and psychologically due to the fact that they did not get something in return from their investment in their children's education. The finding also indicated that unemployed youth are more likely exposed to engage in social ills such as crime and addiction. In this study, family support during unemployment, going back to school and migration are the coping strategies of unemployed youth in the study area. finally, improving the economy and creating adequate jobs that should be made by the government and the town administration, working for good governance, reducing the skill mismatch problem and taking action in enhancing the entrepreneurship skill of the students were recommendations based on the findings of this study.*

**Key words:** assessment, job, unemployment, youth

**IMPLEMENTATION OF INTEGRATED FUNCTIONAL ADULT  
EDUCATION: THE CASE OF MERAB ABAYA WOREDA, SOUTHERN  
ETHIOPIA**

**BY: ABERA GEBO**

**ADVISOR: ABEBAYEHU TORA (PHD)**

**ABSTRACT**

*The major purpose of the study was to look into change and continuity in the policy and practices of adult basic literacy initiatives in Ethiopia and to reduce lessons that can be drawn from the experiences for the future of adult basic literacy program in the country, challenges and elsewhere. Data was obtained through critical review of documents on literacy initiatives; the 1994 Education and Training Policy document; the 2008 National Adult Education Strategy; statistical abstracts and reports of the post-1991 adult literacy activities and available samples of newspaper articles. Interviews were also conducted with 186 individuals who directly participated at various capacities in the previous adult literacy efforts of the country. Random sampling approach has been used to select the interviewees. Analysis of the data generally indicated that the adult basic literacy initiatives were founded on erroneous conception of literacy - the deficit model of literacy- which assumes an absolute state of literacy/illiteracy. The literacy initiatives also lacked continued commitment from the governing bodies and were largely in response to external drives rather than local needs. Ideological motives rather than actual needs of the beneficiaries have guided the initiatives. Looks at the need for quality education that will propel the African continent into the future the assessment of theory and industrial needs are addressed in the light of future demands. Change of current educational practices and forecasting on future trends of economic demands is emphasized. Adult education aims at improving the situation of people by increasing their skills, knowledge and awareness. It is the adult that could transform the nations not children. Adult education brings a great sense of dignity and self-esteem, enhanced respect of others, an ability to take control of one's life and a greater desire to participate in society. The paper examined challenges facing adult education delivery in Nigeria which include failure of the Universal Basic Education act to give adequate recognition of Adult education as a key sector in Basic education, accessibility, under funding and lack or inadequate number of qualified facilitators amongst others. The paper finally proffers suggestions as review of the Universal Basic Education act to accommodate Adult and Non-formal education, increase in funding, establishment of more centers and make them affordable, upward review of facilitators' honorarium amongst others.*

**Key words:** adult basic education, functional literacy, integrated implementation, mixed research and Gamo Gofa zone.



## **5. College of Education and Behavioral Sciences**

### **5.1. Department of Educational Planning and Management**

**THE PRACTICE OF EDUCATIONAL LEADERS IN CHANGE  
MANAGEMENT ROLE: IN THE CASE OF DAWURO ZONE  
EDUCATION OFFICE, IN SOUTH NATION, NATIONALITY AND  
PEOPLES REGION**

**BY-DESTA DENEKE**

**MAJOR ADVISOR: MULATU.D (PH.D.)  
CO-ADVISOR: TAFANO URKE (ASS.PRO)  
ABSTRACT**

*The purpose of this study was to examine the practices of educational leaders on change management role in case of Dawuro zone educational offices. This study was carried through concurrent embedded design with mixed method. For data triangulation both quantitative and qualitative approaches were used. The target population for this study was from Dawuro zone woreda educational offices. In Dawuro zone, there were 10 woreda and one city administration; among them three woreda education offices and one city administration education office were selected through simple random sampling and purposive sampling respectively. Therefore, total population of the study was 214; among them 56 expertise, 7 educational office leaders and 38 supervisors were selected by purposive sampling method and 113 principals were selected by using Yemans (1970) formula. In order to collect data, questionnaires, interview and document analysis were employed. The major finding of the study was leaders were not motivating followers, not convinced of benefits with followers, leaders were not role model for others, leaders were not participatory and there were resistance of followers but not properly managed by organization leaders. Generally leaders practice and influencing was poor. The study was concluded that the leaders in the study area were not identified need assessment of their organization and they had poor plan, poor motivation of followers and poor implementation strategy of organizations change management process. Leaders influencing ability was also poor and the change management plans implementation activity was weak, therefore they were not effective in last five years, finally the study recommend that; Dawuro zone educational department should conduct need assessment for every woreda education office and Tercha city administration education office and due attention for educational office leaders quality improvement*

# **THE INFLUENCE OF SCHOOL LEADERSHIP IN CREATING GOOD SCHOOL CULTURE IN SECONDARY SCHOOLS OF KONSO ZONE**

**BY: ADMASU AMSALU**

**ADVISOR: FRANSUA DALACHEW (PHD.)**

## **ABSTRACT**

*This study was conducted to investigate the influence of school leadership in creating good school culture in secondary schools of Konso Zone. To carry out this study, descriptive survey design along with mixed method was employed. Participants of the study were 5 school principals, three supervisors, 85 teachers, 25 students' parents (PTA) and 28 students' representatives. Teachers and PTA members were selected by simple random sampling and principals, supervisors and students' representatives were selected by using purposive sampling techniques. The data was collected by using questionnaires and interviews. Data collected through questionnaire were analyzed and summarized using statistical tools, such as frequency count, percentage, means, and standard deviation. While qualitative data were analyzed using content analysis approach. The findings of the study indicated that the current practice of secondary schools leaders in creating positive school culture was not satisfactory. It also indicated that, the creation of positive school culture in secondary schools was negatively affected both by internal and external constraints of the schools. It was also concluded that Secondary school leaders basically do not plan to select and properly implement the best strategies in order to overcome the bottlenecks which were being seen on the formation of positive school culture in their respective schools. Based on the major findings, providing short term trainings, providing incentives, active participation of stakeholders, empowering governing bodies, building community relations and sharing common vision and mission were recommended as remedies to strengthen the practice of creating good school culture in the secondary schools.*

**PRACTICES AND CHALLENGES OF CONFLICT MANAGEMENT  
BETWEEN PRINCIPALS AND TEACHERS IN SECONDARY SCHOOLS  
OF GAMO ZONE, SOUTHERN ETHIOPIA**

**BY: MATEWOS ASSA**

**ADVISOR: ENDALE BERHANU (ASSOC. PROFESSOR)**

**ABSTRACT**

*The main purpose of this study was to investigate the practices and challenges of conflict management between principals and teachers in secondary schools of Gamo Zone. Three basic research questions were raised to guide the study. It attempted to identify causes of conflict, teachers' and principals' view on nature of conflict, and conflict management strategies used to manage conflict. In order to attain the objective of the study, the study was employed a descriptive survey design where both quantitative and qualitative approaches were used to collect and analyze data concurrently embedded. Questionnaire and interview were the instrument of data collection. Out of 18 woreda, 5 woreda and 5 secondary schools were selected using simple random sampling to teachers. Available sampling was used to principals, vice-principals and supervisors. Data were gathered from 133 respondents (i.e. 118 teachers, 5 principals, 5 vice-principals and 5 supervisors). Data was analyzed using descriptive statistics (frequency, percentages, means and standard deviations) using SPSS software version 20. Based on the results that poor performance evaluation system, communication problem, bad working conditions, lack of participative decision making, unfair distribution of tasks, unclear policies and guidelines, lack of professional commitment and lack of solving problems through the practice of table discussion were the major ones which took the highest share, for the development of conflict between teachers and principals in the secondary school now. Majority of teachers have seen as conflict as bad and should be avoided while principals viewed conflict as good when managed effectively. Therefore it concluded knowing the causes of conflict before happening is better to handle the issues of conflict before it reaches at the pick/apex and there is no one best method that fit to all situation, preventing and problem solving method were considered to be the best method of resolving conflict in secondary schools. The points that suggested as recommendations were: Woreda Education Office to minimize conflict gives on-job and in-service training courses should be given for principals so as to improve their self-esteem problems and conflict handling strategies. And organize workshops, training and etc. methods to secondary school teachers and principals so as to equip them with the necessary managerial skill, knowledge and different conflict management skill and strategies.*

# THE INFLUENCE OF LEADERSHIP STYLE IN SECONDARY SCHOOLS OF WOLAITA ZONE

**BY: BELETE MENA ALARO**  
**ADVISOR: DEMISSIE DALELO (PHD)**

## ABSTRACT

*The purpose of this study was to assess the influence of leadership style in Secondary Schools of Wolaita Zone. In this study, descriptive survey research design was employed. The design was supplemented by quantitative and qualitative methods. The sampling technique used in the study was availability (main principals and), cluster (woredas and town administrations), simple random (secondary schools) and stratified sampling technique (teachers). The sample size was 12 secondary schools, 268 teachers, 12 main principals, and 6 supervisors with the total of 286 participants included in this study. The data gathering instruments were questionnaire and interview. The participants of the interview were supervisors and main principals and all of them returned the questions. Questionnaire was administered to 268 teachers of which 252(94%) of teachers were properly filled and returned whereas 16(5.9%) questionnaires were not returned from teachers due to the fact that they were not filled the questionnaire properly. Both primary and secondary data were collected from various sources using different techniques. The collected*

*data were analyzed using both qualitative and quantitative methods of data analysis. The dominant leadership style, as secondary school teachers and supervisors indicated, is slightly more transformational ( $M=3.62$ ) than transactional ( $M =3.60$ ) and laissez-faire ( $M =3.22$ ) by their mean value. The most dominant dimension of organizational commitment in the secondary schools was affective commitment. From transformational leadership subscales, individualized consideration was the most dominant one. The results of this study indicates that from transactional leadership subscales, management-by-exception active was the dominant one whereas from transformational leadership subscales, individualized consideration was the most dominant one. The results further revealed that transformational leadership style explained the variance on organizational commitment better than transactional and laissez faire. Therefore, the study concludes that there is no one size fit all and recommended that each secondary school should diagnose its own situation for better pictorial view of what will work for that school. It is further recommended that leaders in secondary schools should embrace more of transformational leadership as it has potential of transforming the secondary schools.*

# **GENDER EMPOWERMENT AND LEADERSHIP DYNAMICS IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: DANIEL GEDEBOGERAMO**

**MAJORADVISOR: DIMODIDANA (ASS. PROFESSOR)**

## **ABSTRACT**

*This study assessed gender empowerment and leadership dynamics in government secondary schools of wolaita zone. In order to achieve this purpose, descriptive survey design was employed. Quantitative and qualitative methods were employed to collect and analyze data in this study. The objectives of this study was to assess factors best explain participation of female teachers in leadership position and link between women empowerment and leadership dynamics in wolaita zone. The study was conducted in five secondary schools from a total of 70 secondary schools in sampled woreda and town administrations. Data were collected from teachers and school principals at government secondary schools of wolaita zone. 18 School leaders, 117 teachers and 5 supervisors were participated in the study. To gather data, questionnaires, interviews and document reviews were employed. Data analysis included descriptive statistics like frequencies, percentage, weighted mean value and standard deviation, while inferential statistics included a t-test. Results showed that female teacher's participation in leadership was low. However, gender empowerment and affirmative action in educational institutions did not have transparent selection criteria and were found to have a great impact on female participation on school leadership positions. Lack of confidence because of the social background and the culture of the community in general, females are not leaders; they are followers rather. In addition, females do not have opportunities to gain bottom experiences in educational leadership that would help them for further advancement because the school leadership was men dominated in tradition. Of all the factors affirmative action related factors were found to have the most influence. It was recommended that the woreda, zonal and regional education bureaus should implement affirmative action as advised by the Ministry of education.*

**Keywords:** Leadership, Gender empowerment, female teachers' participation

# **THE EFFECT OF INSTRUCTIONAL LEADERSHIP IN QUALITY EDUCATION IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY:-ESAYAS ABBO MERETO**

**ADVISOR: DR. MULATU DEA**

## **ABSTRACT**

*Main purpose of this study was to assess the effect, link and challenges of instructional leadership in quality education in Government secondary schools of Wolaita zone. Mixed research methods were employed in this study. Two data collection instruments were utilized in this study. These were questionnaire for the Teachers, principals and supervisors, interview for the woreda/Town/ educational office professionals. The questionnaire was distributed to 158 respondents and the interview was administered for 15 woreda and Town Administration educational office professionals. By critically examining and evaluating relevant data, this study will draw attention to how successful principals manage their schools by providing an environment conducive to the teaching and learning process. It will demonstrate that principal-teacher-student relations to quality education are important, by highlighting professional development and its effect on school effectiveness and student outcomes. The findings of the study results revealed the effect of instructional leadership in quality education were low quality education, less linkage between instructional leadership and quality education and the challenges of instructional leadership in quality education were lack of commitment, awareness problem, lack of support from the Government and stakeholders, ethical problems of the school community, policy gaps of education and equity of education problems were findings of the study in Wolaita zone sampled areas. Hence: the researcher recommended that for the effective implementation of instructional leadership in quality education, principals and every stakeholder should play their roles.*

Keywords: Instructional leadership, professional development, quality education, relation, principal, teachers, supervisors...etc.

**PRACTICES AND CHALLENGES OF TEACHERS MOTIVATION ON  
STUDENTS ACADEMIC PERFORMANCE IN GOVERNMENT  
SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: ASRAT BEKELE**

**ADVISOR: ABRHAM ASARO (PHD)**

**ABSTRACT**

*The purpose of this study was to assess the practices and challenge of teachers' motivation on students' academic performance in government secondary schools of wolaita zone. A mixed methodology, that is, qualitative and quantitative design was employed. In order to achieve the objective of the study, descriptive survey research design was used. Four town administration and five secondary schools were selected through simple random sampling technique. Two hundred eleven (211) teachers were selected by simple random technique and participated in this study from a total of 448 teachers. In the interview session principals and supervisors were the respondents of the study. The questionnaire, interview, and document analysis were the main instruments of data collection. The analysis of the quantitative data was carried out by using frequency, percent, mean, standard deviation, correlation and regression computed by using SPSS version 20. The narrative of the qualitative data was carried out to interpret the interview and document analysis. The study revealed that, there is a significant correlation between teachers motivation and students academic performance in government secondary schools of wolaita zone. Furthermore, the results showed lack of extrinsic and intrinsic factors in motivating secondary school teachers on students' academic performance. Due to this, teachers were not successful to improve the students' academic performance as well as the achievement of the school's goal. In general, the finding supposed to conclude, secondary schools in Wolaita Zone had not worked effectively on improving the motivational level of teachers to improve students' academic performance. Based on the findings, it was recommended that secondary schools, town administration, and educational offices need to work on improving extrinsic and intrinsic factors to give necessary incentives and benefit for teachers of secondary schools.*

**Key Words;** Teachers Motivation, Motivation, Academic Performance, intrinsic motivation, extrinsic motivation, secondary schools

# **CHALLENGES OF PRINCIPALS IN IMPLEMENTING INSTRUCTIONAL LEADERSHIP AT SECONDARY SCHOOLS OF GAMO ZONE**

**BY: ABAYNEH ASRAT**

**ADVISOR: ASHEBIR BEZABIH (PH.D.)**

## **ABSTRACT**

*The main purpose of this study was to assess the implementation of instructional leadership and the challenges faced in secondary schools of Gamo zone. To address these objectives, the researcher has undertaken the study based on two basic research questions. In order to achieve the intended objectives and answer the basic research questions, mixed approaches were employed. In order to gather data, questionnaire for randomly selected 68 teachers, 6 principals, 6 v/principals; interviews and FGD to PTSA, KETB and student council members were used as instruments of data collection. The quantitative data collected through the questionnaire and the qualitative data gathered through interviews and FGD. The analysis of both data indicated that secondary school principals of Gamo zone are framing the school goals, protect instructional time, sometimes coordinating the curriculum; do not engaged in the implementation of supervising and evaluating instructions and monitor student progress; they do not performing the tasks of maintain high visibility; providing incentives for teachers and learning and promoting professional development domains. In short, it was concluded that secondary school principals were not instructional leaders. Therefore, ineffectiveness of principals in implementing instructional leadership was attributed by the following challenging factors such as negative attitude of teachers and principals; heavy workloads on the part of principals, lack of adequate time, increasing class size; the inability to communicate the school goals; Hence, the MoE and the SNNPREB should provide relevant training for school principals and follow up them. The principal should show greater visibility, involvement and delegate some activity to others.*

# PRACTICES AND CHALLENGES OF CONTINUOUS ASSESSEMEN IN SECONDARY SCHOOLS OF GAMO ZONE

**BY: AREGA SALILIGH W/TINSAE**

**ADVISOR:-ENDALE BERHANU (ASS. PROFESSOR)**

## **ABSTRACT**

*The main purpose of this study was to investigate the practice of Continuous Assessment and Challenges in Secondary Schools of Gomo Zone. For this study, descriptive survey research design was employed. Both quantitative and qualitative methods were used in data collection and analysis. Among the total of 352 samples, 43 of the teachers and 297 of students filled in and returned the questionnaire. In addition, six secondary school principals and six secondary school supervisors were interviewed. The collected data were analyzed using frequencies and percentages. To makes the findings easily understandable for its readers, tables, figures and charts were used. The study indicated the following factors that affect the proper implementation of continuous assessments: lack of sufficient inputs, lack of interest towards the subject teachers, inadequate knowledge of the way, lack of interest and commitment on teachers and students, poor administrative support, large class size, absence of continuous assessment guide line were the major factors that hindered the implementation of continuous assessment in the concerned areas. Most teachers have no training regarding continuous assessment. There was a great difference among schools in practicing continuous assessment to implementation. Thus, to improve the situation, it was recommended that: Preparing manuals and guidelines for the front line practitioners and efforts should be made for students, teachers, school principals' and supervisors. Teachers are expected to plan and involve students by providing tasks. Finally; the study recommends that the concerned bodies should mitigate the proper implementation of CA through capacitating the capacity for teachers and students.*

**Key words:** continuous assessments, practices, strategies secondary school

**FACTORS AFFECTING IMPLEMENTATION OF TEACHERS  
PERFORMANCE APPRAISAL IN GOVERNMENT SECONDARY SCHOOLS  
OF SILTIE ZONE, SOUTHERN ETHIOPIA**

**BY: NASSIR JEMAL ABDREHMAN**

**ADVISOR: TAFANO OUKE (ASSOCIATE PROF.)**

**ABSTRACT**

*The title of the study was factors affecting implementation of teachers' performance appraisal in secondary schools of silte zone. The major purpose of this study was to assess the factors affecting implementation of teachers' performance appraisal in secondary schools of Siltie Zone, Southern Nations, Nationalities and People's Region. In order to achieve the objective of the study, descriptive survey method was employed. The study was conducted in five secondary schools. The schools and teachers were selected by simple random sampling technique while supervisors, principals and vice principals were selected by purposive sampling technique. The study included 5 principals, 5 vice principals, 5 supervisors, 132 teachers. Questionnaires, interviews, and document analysis were used to collect data. The data gathered through questionnaires were analyzed using percentages, frequencies, mean, standard deviation and correlation. The data gathered through interviews and document analyses were analyzed using words. The finding of the study portrayed that the management process affect performance appraisal, there was planning problem, the teachers not taken training, principals negative attitude , appraisers biased ,lack of commitments to warred appraiser, the appraiser not give timely feedback after post appraisal process, there was no fixed time for discussion, teachers were not involved designing, reviewing and improvement of teachers' performance appraisal criteriawere found to be the major factors that affect the teachers performance appraisal in the secondary schools of Siltie Zone. Hence, it was recommended that each school should plane before implementation of performance appraisal, effectively support, lead and control, should give timely training to develop teachers awareness, give timely feedback, create effective communication relationship, should participate teachers in designing, reviewing and improving of teachers performance appraisal criteria.*

# **FACTORS AFFECTING IMPLEMENTATION OF COOPERATIVE LEARNING IN ENGLISH SUBJECT OF GOVERNMENT SECONDARY SCHOOLS IN DAWURO ZONE**

**BY: NIGUSSE DOLANGO DODE**

**ADVISOR: MARY THUO (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess factors that affect implementation of cooperative learning in English subject of government secondary schools in Dawuro Zone. The study employed a descriptive survey research design with both quantitative and qualitative research methods used in data collection and analysis, concurrently. It has four Specific Objectives, such as: to identify how cooperative learning is implemented for English subject in secondary school, to examine if there is significant difference between respondents and among different schools on the implementation of cooperative learning in English subject, to identify factors that significantly affect the implementation of cooperative learning in English subject of secondary schools and to identify challenges that hinder implementation of cooperative learning in English subject of secondary schools. Four government secondary schools were selected (Issera, Kechi, Tocha and Mari). A sample of 291 students 20 English teachers, 8 principals and 4 supervisors were included through simple random sampling for students and purposive sampling techniques for teachers. Principals and supervisors. Data collection instrument included; questionnaire, classroom observation, and interviews. Quantitative data were analyzed by using descriptive statistics (frequency counts, percentages means and standard deviation), and Inferential statistics (correlation, Regression, one way ANOVA and t-test) using SPSS version 20; while qualitative data were analyzed using content analysis and themes. The findings revealed that implementation of cooperative learning in government secondary schools were moderate, most teachers did not implement the strategy of cooperative learning effectively in the four skill sessions for English subject class, there was a statistically significant difference between teachers' and students' responses at 1% significant level ( $t=3.969$ ,  $df=292$ ,  $p=.000$ ), the implementation of cooperative learning statically significant different between Essera and Tocha ( $p=.000$ ), and between Essera and Mari ( $p=0.01$ ), there were no statistical significant difference on CL implementation between Essera and Kechi ( $p=.188$ ), Tocha and Mari( $p=.844$ ), and Mari and Kechi ( $p=.381$ ), the class size had the highest significant factor towards implementation of cooperative learning followed by resources, school environment and students' attitude. major challenges that hinder the implementation of cooperative learning in English subject, were: high class population, shortage of learning materials, teachers focus on the theoretical aspects and physical set-up of classroom. Even though the level of cooperative learning implementation was low, the future of cooperative education is very bright. In all, instructional process, would be efficient if student-centered approaches could be added, create awareness with implementers and give them training on how and why cooperative learning should be implemented, organize experience sharing for cluster teachers on best practices, and improve class population, lesson period load and the physical set-up of the school environment and classroom.*

Key words: Cooperative learning, Implementation, Schools, English, Strategies, Group work, Dawuro Zone

# **PRACTICES AND CHALLENGES OF INTEGRATING INFORMATION AND COMMUNICATION TECHNOLOGIES IN PEDAGOGICAL CENTERS OF GOVERNMENT SECONDARY SCHOOLS IN WOLAITA ZONE**

**BY: NAZRATE GALCHA BETALO**  
**MAJOR ADVISOR: MARY THUO (PHD)**

## **ABSTRACT**

*The purpose of this study was to investigate practices and challenges of integrating information and communication technologies in pedagogical centers in government secondary schools of Wolaita Zone. This study employed a descriptive survey research design where both Quantitative and qualitative approaches were used to collect and analyze data concurrently. The specific objectives of this study were: to identify how teachers integrate information communication technologies, to identify the attitude of teachers and to assess challenges. The study conducted in five secondary schools in the five selected Woredas and town administrations. 193 teachers included by simple random method five pedagogical center representatives and five principals included based on availability in this study. Questionnaires, interviews and observation were tools of data collection. Findings on usage of information technology tools, most of teachers used some times, majority of them used the tools in their offices and in the computer rooms without involving students. Even though most of the teachers had positive attitude towards information technology, the findings showed that teachers had a skill gap on how to use the technology tools. Teachers faced many challenges while integrating information communication technologies in teaching learning process, including; lack of training for pedagogical centers representatives and teachers; lack of school support, shortage of time to integrate the technology in classrooms, poor environment set-up in computer laboratory rooms and etc. This study recommends the number and types of ICT tools should be improved, the infrastructures that support information communication technologies should be improved, different trainings should be organized at the school level for teachers and Pedagogical centers representatives, leadership and instructional support need to be given attention by school administrators, to consume time while integrating information communication technologies in teaching learning process, the computer laboratories and learning classrooms should be filled with necessary equipment and should be neat in every secondary school and keeping up the tools from virus attack and providing maintenance on time is recommended.*

**PRACTICES AND CHALLENGES OF SCHOOL LEADERSHIP IN  
TEACHING LEARNING PROCESS IN SECONDARY SCHOOLS OF  
KAMBATA TAMBARO ZONE**

**BY: KIDANE H/MARIHAM**

**ADVISOR: ASHEBIR BEZABIH (PHD)**

**ABSTRACT**

*The purpose of this study was to investigate practices and challenges of school leadership in teaching learning process in secondary schools of Kambata Tambaro Zone. To achieve this purpose, explanatory research design was employed along with quantitative and qualitative method. In this study, 3 woredas were included by using simple random sampling. From these selected woredas, 6 secondary schools were included using purposive sampling. From these sample schools, 40 school leaders and 3 supervisors were selected by using censes enumeration sampling, while 124 teachers were selected by using simple random sampling and 3 woreda education office experts included purposive sampling. Questionnaires were used as main tool of data collection. Interview was used to substantiate the data gathered through questionnaires. Document analysis was also part of data collection for the study. Using statistical package for social sciences version 20, quantitative data were analyzed using descriptive statistics such as frequency, percentage, mean, standard deviation and independent sample t-test were employed to analyze quantitative data while description analysis approach was used to analyze qualitative data. Finding of the study revealed that conduciveness of school environments, availability of information on aspects of teaching and learning and identifies institutional strengths and weaknesses to improve education quality were rated low; the process of education to improve quality in relation to teaching learning process and reasonable teachers and students interaction were unsatisfactory. There were no adequate text books, classrooms, qualified teachers and school facilities in order to enhance quality education quality. It can also be concluded that inputs of teaching learning processes such as of text books and conduciveness of school environments and undertake teaching-learning processes smoothly were low, this is due to low attention was give from school principal in order to enhance quality education. Based on these findings, woreda education office better strengthen the position of school leaders in their function as persons responsible for the improvement of teaching and learning in schools and it is advisable for the education officers make strong efforts to improve the capacity of supervisors, by conducting regular meetings with supervisors and teachers, creating an opportunity for experience sharing among the departments were recommended.*

# **INFLUENCE OF EDUCATIONAL DECENTRALIZATION ON QUALITY EDUCATION IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: NURIA PETROS**

**MAJOR ADVISOR: DIMODIDANA (ASS. PROF)**

## **ABSTRACT**

*The main purpose of this study was to assess the, the influence of educational decentralization on quality education in secondary schools of wolaita zone by conducting both qualitative and quantitative approaches, the objective of these thesis was to assess the influence of educational decentralizations on quality education in wolaita zone. To this end, a total of 154 secondary teachers were randomly selected basing their sample size depending on the proportion of number of teachers in selected secondary schools against the grand total of the sum of eight secondary school teachers, identify the strengths and weaknesses of the policy and propose pertinent recommendations accordingly. The study was conducted only in selected wolaita zone secondary schools only. The research data collected through questionnaire and interview. Education office experts and supervisors were selected for interview guided questions. Descriptive research survey method was used. Semi structured interviews and questionnaires were used to collect the necessary information. Data were analyzed using the “Statistical Package for the Social Sciences” (SPSS) version 20 software. The findings showed that there are noticeable improvements in the level of transferring authority to recruit teaching staff, financial and material resources administration and developing the teachers’ capacity to enhance education quality at lower levels. Nevertheless, the findings indicated some core limitations and gaps which require timely corrective measures. These are the existence of weak school administration, system; shortage of experienced teachers; lack of motivation and inadequacy of training; inadequacy of instructional aid, poor dedication and lack of parents’ participation. school heads to plan to provide training to the school teachers according to an ongoing program, supervisors to do evaluation for the benefits of both the school and the teachers, school heads to make an effort to increase teachers’ job satisfaction, the WEO to strengthen its role in the school teaching-learning process and parents to support their children at home, follow-up in doing home-work and study and the role of parents in school learning and teaching to be motivated and encourage to improve quality of education.*

# STUDENTS DISCIPLINARY PROBLEMS IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE

BY: YISAK JORGE HERANO

ADVISOR: TAFANO OUKE (ASSOCIATE PRO.)

## ABSTRACT

*The purpose of this study was to assess the types and causes of students' disciplinary problems in secondary schools of Wolaita Zone and to forward helpful interventions to minimize the problems in the schools under study. The study was based on descriptive research methods. Qualitative and quantitative approach was used so as to come up with adequate /proper findings. A Proportional stratified sampling technique was employed to take the number of subjects selected from each stratum based on percentages of subjects in the population. Descriptive statistics mainly, cross-tabulations, frequency count, and percentages mean and weighted mean were used by employing SPSS computer software in the presentation, analysis and interpretation of the findings. The study reveals that, the major causes of students' disciplinary problems are the Parents limit their participation in the handling of students' disciplinary problems. They were absent on the follow up of students' day to day activities. The dynamic factors behind school level disciplinary problems were the collective effects of school environment. The absence of strict school rules and regulations, the absence of parental follow-up on students' day to day activities, the absence of good leadership of school principals and the negligence of the society to take part in alleviating the students' disciplinary problems are some of the cause of students' disciplinary problems to be found in this study. Furthermore, cheating during examination b, learners do have social contact c, disobedience d. fighting e. students use cell phones in the school, f. stealing g. calling teachers by name and h .damaging school property or vandalism were identified as the major types of students disciplinary problems in this study. Therefore, Schools should have strong relationships with parents through PTSA and should work in coordination with them concerning the disciplinary problems or issues. Teachers were the contribution of parents and the society to students disciplinary problems so that, they close relationships with them to minimize it. Parents work cooperatively with the school and must not be ignorant of their child's behavior in order to shape them in a desirable manner and to create conducive atmosphere by having integrated relationships with their.*

**Key words:**-behavior, cause, discipline, behavioral problem and students.

# **FACTORS CHALLENGING CLASSROOM LEARNING ENVIRONMENT IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: AYELE TERA**

**ADVISOR: ABRAHAM ASARO (PHD)**

## **ABSTRACT**

*The purpose of this study was to identify factors challenging classroom learning environment in government secondary schools of Wolaita zone. To attain this purpose, the study used descriptive survey design. Quantitative data gathering method was used. The data gathering area and targeted populations of the study were selected using simple random and purposive sampling techniques. The sample size of teachers and student participants was 10% and of the rest ones were 20%. The population of targeted woredas and town administration were 4004. The sample size of the targeted population was 363. Additionally, 4 School principals were purposively selected for interviewing case. Questionnaires and interview were the data gathering instruments. The questionnaires were tested by Cronbach's alpha for reliability testing with the averagely score of (.973). Then, the data gathered through questionnaires were analyzed using statistical tools of percentage, mean, standard deviation, and T-test. Interview was used for supplement of data obtained through close-ended questionnaire. The study revealed that classroom learning environment was seriously challenged by teachers' related factors, students' related factors, and classroom teaching strategies related factors. Therefore, the general recommendations forwarded to tackle such problems were; ZED and WEO in collaborate better to adjust refreshment program for teachers in the areas of teachers responsibilities, effective teachers characteristics in classroom and effective classroom teaching strategies; on other hand, school instructional leaders, teachers and students in collaborate better to carry out their responsibilities about classroom learning environment*

**Key Words:**-Conducive, Learning Environment, Classroom Climate, Teacher-Related Factor, Student-Related Factor, Classroom Teaching Stra

**CONTRIBUTIONS OF CLINICAL SUPERVISION ON TEACHERS'  
PROFESSIONAL DEVELOPMENT IN SECONDARY SCHOOLS OF  
WOLAITA ZONE, ETHIOPIA**

**BY: UFAYSA BELAYNEH**

**ADVISOR: DIMO DIDANA (ASSISTANCE PROFESSOR)**

**ABSTRACT**

*The purpose of the study was to investigate contribution of clinical supervision in teachers' professional development in government secondary schools of Wolaita Zone. To accomplish this purpose, a descriptive survey design was used. The study was carried out in three cluster randomly selected woredas and two city administration and in all the six available secondary schools of the selected area. Data were collected through questionnaires from 125 teachers and 38 clinical supervisors (vice-principals, senior teachers, department heads and supervisors) were selected using simple random sampling and availability for vice-principals. Data were also collected from six principals and five cluster supervisors through an interview. Document analysis were also used. Data were analyzed using percentage, mean, standard deviation, and  $t$  – test. The finding of the study revealed that supervisors were not properly performing their contribution as clinical supervisors; the class observation being practiced was not effective in carrying out the procedures of clinical supervision; the contributions made by the clinical supervisors for the teachers development was practiced poorly since the problems observed during classroom observations were not improved by using different mechanisms. Being overloaded with administrative task other than pedagogical task of clinical supervisors and lack of relevant skills on supervision, were among the major challenges that hinder the effectiveness of clinical supervisors on their contribution. The study concluded that the procedures of clinical supervision were not emphasized by clinical supervisors and also the clinical supervision contribution was not directly connected with teachers' development. Therefore, this study recommends that the Wolaita Zone Education Offices should build capacities of the clinical supervisors by providing them with the necessary supervision training, clinical supervisors are also encouraged to pay due attention to the five steps of clinical supervision and relate to the teachers' development in continuously assisting and providing constructive feedbacks. This in turn will help fill the skill gaps of the teachers for the better improvement of instruction.*

**Key words:** Teachers, clinical supervision, professional development, secondary schools,

**FACTORS AFFECTING STUDENTS' MATHEMATICS  
COMPETENCE IN GOVERNMENT SECONDARY SCHOOLS IN  
GAMO ZONE**

**BY: SAHILUCHUTULO**

**ADVISOR: MARY THUO (PHD)**

**ABSTRACT**

*This purpose of this study was to examine factors affecting students' mathematics competence in grade 9<sup>th</sup> and 10<sup>th</sup> mathematics at secondary schools of Gamo zone. Factors affecting in the implementation of active learning in mathematics subject in secondary schools that affect students to learn are teacher related factors, student related factors and institutional factors. The objectives of this study were to determine how active learning approach was implemented in grade 9<sup>th</sup> and 10<sup>th</sup> mathematic subject, to assess the views secondary school teachers' regarding implementation of active learning in mathematics subject, to identify active learning approach increase competences, to analyze challenges that affect implementation of active learning in grade 9<sup>th</sup> and 10<sup>th</sup> mathematics subject in secondary schools and to determine the possible solution to improve students mathematics competence in Gamo zone. A descriptive survey research design was employed where both qualitative and quantitative research methods were used to collect and analyze data concurrently. The study comprised of principals (5) vice principals (5), unit leaders (10), class representatives (78), mathematics teachers (32) and cluster supervisor (5) by using purposive non random sampling techniques. The study employed four research instruments; questionnaire, interview, document review and classroom observation. A quantitative analysis was applied for closed ended questions where both descriptive statistics (frequency counts, percentages, mean and standard deviations), and inferential statistics (independent t-test, correlation, and Regression) were employed to analyze the raw data for this study. Quantitative data collected through questionnaire, and analyzed by using SPSS version 20 and qualitative data analysis was also employed for analysis for data that were gathered from the interview, class observation and Document review, where data were easily summarized through narrative, description and /or direct quotation of statement from the participants' opinions. The study revealed that implementation of active learning was low. Teachers were found to use; group work, students' peers, pair work and recap/recall as inside and outside classrooms activities. Using a correlation analysis, the study revealed that coverage of syllabus, teachers training, students attitude, leadership support, classroom observation and resource were positively associated with active learning while teachers attitude and teachers competence had a negative influence on active learning. Result from linear regression analysis found that increase on teachers' coverage of syllabus and leaders support would improve mathematics competence. Besides, sex was found to have an influence on students' mathematics competence. The study concluded that proper implementation of active learning in mathematics subject could be addressed by investing on teachers' trainings, teacher's attitude, teachers' competences, coverage of syllabus, students' attitude, and provision of resources.*

Keyword: active learning, mathematic subject, high school, Gamo Zone

**PRACTICES AND CHALLENGES OF HUMAN RESOURCE  
DEVELOPMENT IN SECONDARY SCHOOLS OF HADIYA ZONE**

**BY: DESTA SABIRO**

**ENDALE BERHANU (ASSOC. PROFESSOR)**

**ABSTRACT**

*Human resource development is a people-oriented concept that focuses on developing the skills, knowledge and competencies of people. The cross sectional study was conducted to explore the practices and challenges of human resource development in secondary schools of Hadiya Zone, South Ethiopia. For this purpose, descriptive survey research design was employed by which questionnaires, interviews, focus group discussion and document analysis were used as instruments of data gathering. Both primary and secondary sources of data were used. The primary data sources were teachers, principals, supervisors, woreda education office and zone education department experts and heads. The data were collected from randomly selected 104 secondary school teachers including eight principals and eight supervisors were selected by using purposive sampling and ten woreda and one town administration education officers and zone education department expert and head of Hadiya Zone were selected purpose fully. A total of 130 respondents were included as subjects of the study. Data were analyzed and interpreted using descriptive statistics based on SPSS version 20 and qualitative technique. The analysis of the data was carried out by using percent, mean and standard deviation. The finding of the study showed that there were no opportunity to attend workshops within and outside the school, objectives of training and development had not been well presented to trainees, no clear and transparent training and development criteria for selecting trainees and trainers, inadequate budget, allocation of insufficient time and lack of attention to professional development. Besides, HRD practice of the school did not reduce the employee turnover rate in the secondary school in study area. In conclusion; the practices of human resource development in the study area were not sufficient and satisfactory as well as challenge full. Therefore, appropriate attention should be given to; training and development, selection criteria of trainee and trainers, periodic training needs assessment, allocation of required resources and giving more emphasis on professional development, in secondary schools, Woreda education offices and Zone education department should be warranted.*

**Keywords:** Challenges, Hadiya Zone, Human Resource Development, practices, Secondary School.

# **PRACTICES AND CHALLENGES OF SCHOOL BASED SUPERVISION IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: TADESSE KUMA**

**ADVISOR: ASHEBIR BEZABIH (PHD)**

## **ABSTRACT**

*The purpose of this study was to investigate practices and challenges of school based supervision in secondary schools of wolaita zone. To serve this purpose, explanatory research design along with quantitative and qualitative was employed. For the study, six Woredas were selected through simple random sampling technique. From these selected woredas 8 secondary schools were included using simple random sampling technique. From these sample schools, 6 supervisors and 6 woreda/town education office experts were selected by using purposive sampling, while 134 teachers were selected by using simple random sampling techniques and 80 school based supervisors (principal, vice-principals, school based supervision committee members, department heads, senior teachers and unit leaders) were included through availability sampling technique. Questionnaire was used as main tool of data collection from teachers and school based supervisors. Interview made with supervisors and woreda/town education office experts was used to substantiate the data gathered through questionnaires. Document review was also part of data collection for the study. Data were analyzed using descriptive and inferential statistics while narration was used to analyze qualitative data. The result of the study indicated that teachers lack awareness and orientation on the activities and significance of school-based supervision and inability of supervisors to apply the necessary procedures for classroom observation properly. On the other hand, the factors that influencing the school-based supervision, lack of relevant training programs for supervisors, scarcity of experienced supervisors in school-based supervision activities and lack of supervision manuals in the schools. Based on the finding of the study the following it is possible to conclude that school leaders did not consider supervisory activities to be of any help to improve student's learning. Finally, to minimize the problems of school-based supervision in secondary schools, school leaders should need to establish the supervision team members based on the procedures and consent of staff and jointly develop supervision plan in order to create common understanding and sense of ownership to carry out their responsibility to practice school based supervision in each school.*

**Key Words:** Challenges, Practices, School-Based Supervision and Secondary Schools

# **PRACTICES AND CHALLENGES OF UTILIZING INSTRUCTIONAL MEDIA IN SECONDARY SCHOOLS OF WOLAITA ZONE, ETHIOPIA**

**BY: -MATHEWOS LEGAMO LEMO**

**ADVISOR: ABRAHAM ASARO (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess the practices and challenges of utilizing instructional medias in secondary schools in Wolaita. The study has employed descriptive research design. It has followed mixed method of research approach which include both quantitative and qualitative methods giving more focus to qualitative method. Total of 265 samples have been selected from target population using multi-stage sampling method. Convenience sampling method was used to select woredas, simple random sampling was used to select secondary schools from the stated woredas, and judgmental, convenience, and simple random method was used to select students, teachers and woreda education officers respectively. Census method have been used to select school heads. The study employed cross-sectional survey method in which questionnaire and interview were mainly used to collect data. The collected data were descriptively analyzed using percentages and frequencies. The result indicated that the secondary schools were using instructional medias like textbooks, charts, graphs, and posters in their respective schools, they believe that utilizing instructional medias improves the students' performance, there were challenges that raise from the parts of teachers like reluctance and poor skill, from the part of government like distribution problem and from the parts of student like not properly utilizing the medias and avoiding to utilize at all. The schools were using communicating with teachers, proper budgeting, lobbying aiding organization, implementing policies as the strategies to overcome the challenges. It was recommended that the schools need to well manage the instructional materials on hand by implementing proper inventory management system and work in coordination with students, teachers, woreda education officers, other government bodies and the general public.*

**Key Words: instructional media, utilization, schools**

# **THE LINK BETWEEN TEACHERS' COMPETENCIE AND STUDENTS' ACADEMIC ACHIEVEMENT IN URBAN PUBLIC SECONDARY SCHOOLS OF WOLAITA ZONE, SNNPR**

**BY: ZERIHUN ALEMU**

**MAJOR ADVISOR- TAFANO OUKE (ASSOCIATE PROFESSOR)**

## **ABSTRACT**

*Quality education is base for the development of any nation. For quality education, the competent teachers are necessary. Every country has designed its own standards to measure proficiency of teachers. Ethiopia has also presented its standards for teachers. The study was made an effort to assess the "Link between Teachers Professional Competence and Students Academic Achievements in urban Secondary School of Wolaita Zone" in the light of National Professional standards for Teachers (2007). The main objective of the study was to explore the link between teachers' professional competencies and students' academic achievement in Urban Public Secondary Schools of Wolaitta Zone to determine how students' academic achievement might have been enhanced through teacher competencies. The study was delimited to urban public secondary schools, achievements of students of 12th class during first semester of academic year session 2012 E.C. The study was descriptive in nature and was conducted by survey method. Data were collected for research with the help of interview, document analysis and questionnaire that was validated by experts and Cronbach Alpha's method. Sample of the study was 302 students' and 78 academic staff. For concluding results of study, percentage, frequency, mean score, Average mean, correlation and regression were used. It was found out that the implementation of teachers professional competence standards framework was managed much disordered way and there was no attempt to train and coach teachers and so that the domains were not defined clearly by the academic staff. It was also found that, the lack of teachers' professional competence framework, the absence of responsible bodies, and lack of orientation session made the extent teachers competence in standards was less. In view of the extent of students academic performance, it was concluded that most students scored poor or unsatisfactory since teacher's incompetent ultimately affected the students' achievement. It meant that teachers' competences have negative effects on achievement of students at secondary schools of Wolaita Zone. Ultimately it concluded that there was positive and moderately high or low correlation between teachers' competence standards and students' achievement with varied Pearson Correlation values and also significant. The study was recommended that government have an access to teacher professional competence standards framework to all teachers or schools, the National Teachers Professional Competence standards for the country may be defined and teachers and others may be train through refresher courses accordingly. Furthermore it was recommended that educational authorities may take full responsibilities and accountability for the execution of the standards and guide teachers to enhance their professional competence.*

# PRACTICES AND PROBLEMS OF PRINCIPALS' DECISION MAKING IN SECONDARY SCHOOLS OF WOLAITA ZONE

BY: AYELE AYZA WAKASO

ADVISOR: ASHEBIR BEZABHI (PHD)

## ABSTRACT

*The purpose of this study was to investigate the practices and problems of principals' decision making in secondary schools of Wolaita Zone. The design employed in this study was explanatory sequential research design of mixed research method. The sampling technique used in the study was simple random (schools, woredas and town administrations) and availability (main principals, vice principals, WEO heads, KETB heads, PTSA members, supervisors and student council members) sampling technique. The sample size was 8 rural woredas and 2 town administrations, 10 secondary schools, 150 department heads, 10 main principals, 20 vice principals, 10 supervisors, 10 WEO heads, 10 KETB heads, 50 PTSA members and 50 student council members with the total of 310 participants included in this study. The data gathering instruments were questionnaire, interview, FGD and document analysis. The participants of interview were supervisors and WEO heads. Questionnaire was administered to 150 department heads and 30 principals of which 140(93.3%) and 30(100%) of department heads and principals were properly filled and returned respectively, whereas 10(6.6%) questionnaires were not returned or not filled properly. KETB heads, PTSAs members and student council members were participated in FGD. The collected data were analyzed using both qualitative and quantitative methods of data analysis. The study finding indicated that the current practice of decision making in secondary schools were below the expected level. The participation of school stakeholders in school decision-making process was not at the expected level. School leaders need try to involve stakeholders in decision making practices, process and area through which teachers and stakeholders develop experiences of decision-making. The study also revealed that lack of training on school management, lack of motivation by principal to involve stakeholders and school leaders' unwillingness to share decision making process with others were highly affected decision-making practices in sample secondary schools. Based on these findings and conclusions the following points were recommended. The study recommended that principals should involve teachers to practice decision making. Concerned body and school management ought to give training and workshop to school leaders of secondary schools on participatory decision-making, and school leaders' task allocations should be done by the collective decision of the school leaders. Further research is recommended that a study be carried out on the relationship between the extent of principal participation in decision-making and teacher performance in secondary schools.*

**Key words:** Problems, practices, decision making, decision making process, stakeholders, secondary school

**ASSESSMENT OF ACTION RESEARCH IMPLEMENTATION AS A  
TOOL FOR TEACHERS' CONTINUOUS PROFESSIONAL  
DEVELOPMENT IN GOVERNMENT SECONDARY SCHOOL OF  
WOLAITA ZONE**

**BY: FEKADU LETTA LALE**

**ADVISOR: MARY THUO (PHD)**

**ABSTRACT**

*The purpose of this study was to assess action research implementation as a tool for teachers' continuous professional development in Government secondary schools of Wolaita zone. To conduct this study, the researcher employed descriptive survey research design where both quantitative and qualitative approaches were used to collect and analyze data, concurrently. The study addressed the following objectives: how teachers plan and conduct in action research, supervisors support in action research, supervisor support defer by gender in action research, identify practice associated effective action research, challenge which teachers face conducting action research. The study was conducted in wolaita zone with a total sample size of 150 respondents from five woreda, five secondary school. A Simple random sampling technique was used for teachers and availability for principals. Data collection tools for this study included; questionnaire, interview, Data analysis methods included; descriptive statistics such as frequency, percentage, mean and standard deviation while inferential statistics included an independent t-test were used to analyze the quantitative data. Qualitative data were analyzed by narration. The results from the analysis show that action research implementation as a tool for teachers' continuous professional development was found at low level. There was lack of training for teachers with regard to action research. Teachers were not supported when data collection, result presentation, experience sharing. no availing different materials, no encouragement, problem by allocating adequate budget. There for it can be concluded that school principals have not facilitated training to conduct action research. The recommendation forwarded is that the school being with the woreda education office should arrange training for teachers on the action research, supervisor support when data collection, result presentation, experience sharing.*

# PREPARATION AND UTILIZATION OF INSTRUCTIONAL MATERIALS IN SECONDARY SCHOOLS OF WOLAITA ZONE

BY: WALELIGN WADA

ADVISOR: DIMO DIDANA (ASST. PROFESSOR)

## ABSTRACT

*The main purpose of this study was to examine the practices and challenges in preparation and utilization of instructional materials in secondary schools of Wolaita Zone. The descriptive survey research design was employed in the study. The method employed in this research was the mixed method that both quantitative and qualitative methods were applied. It was based on four objectives: to assess the current practices in preparation and utilization of instructional materials, to explore the views of teachers on preparation and utilization of the materials, to examine challenges that secondary school teachers face in preparation and use of instructional materials, and to point out the strategies to be used to minimize the problems related with preparation and utilization of instructional materials. The study population was the secondary school teachers, directors and supervisors of Wolaita Zone. The sample schools were included from the entire population by using simple random sampling method. The sample of 166 respondent teachers is selected by applying systematic sampling method where as six school principals and three supervisors were included in the sample by purposive sampling method. Questionnaire was the main instrument of data collection. Interview and observation were also utilized to substantiate the data obtained through the questionnaire. The data obtained through the questionnaire was analyzed quantitatively using statistical tools such as percentage, frequency, mean, and standard deviation while data obtained through the interview and observation were analyzed qualitatively. The major findings revealed were that inadequacy of fund, non availability and inadequacy of instructional materials, shortage of tools and resources to improvise, lack of knowledge and skills as well as interest of teachers, lack of strict supervision from the part of school leaders and unwillingness of school principals to spend for the activities of instructional materials production were among the major challenges. The conclusions drawn from the study were inadequate funding, non availability and inadequacy of instructional materials due to shortage of budget, lack of required skills to improvise are among the major challenges investigated during the study. The major recommendations forwarded toward the practices and challenges in production and utilization of instructional materials in teaching learning settings are the sector of education should adequately fund the schools to enhance their capacity and should organize training in collaboration with stakeholder to acquaint teachers with needed skills and knowledge of production and utilization of instructional materials.*

**Key words:** improvisation, utilization of instructional materials, resource centers, pedagogic centers

# **THE LINK BETWEEN GOOD GOVERNANCE AND SERVICE QUALITY AT GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: DAWIT MEGA GADANA**

**ADVISOR: - MULATU DEA (PHD)**

## **ABSTRACT**

*Good governance particularly in the secondary school has become ever more important in improving service quality. The exercise of good governance was crucial for secondary schools in order to deliver service quality. Therefore, the objective of this research was to identify the link between good governance and service quality in Government secondary schools of Wolaita Zone, SNNPR. The study employed mixed method through quantitative and qualitative approach in order to find the present conditions and point out the immediate solutions. The study was conducted on 18 PSTA members, 18 KETB members, 18 school principals, 97 teachers and 12 students' representatives, totally, 163 respondents from the selected secondary schools. The instruments used to collect data were questionnaire for school principals, teachers and students' representatives as well as interview for PSTA and KETB members. The obtained data from questionnaire was analyzed using frequency and percentage, mean, standard deviation, inferential statistics, chi-square and correlation whereas the information gathered through interview was analyzed through narration qualitatively. The findings of the study were lack of good participatory trend, low level of efficiency and effectiveness, lack of good accountability mechanism, lack of transparency and openness, lack of respecting of the rule of law and equity, low customer satisfaction, interference from political authorities, lack of leadership competencies and commitment, and a high extent of corruption. Based on the above findings, the researcher concluded that the service quality of the study area was very low since good governance and service quality have strong relationship. One can recommended that the school should establish a good participatory trend, a good accountability mechanism, and a high customer satisfaction .They also have to develop transparency and openness, respecting the rule of law and equity, commitment, and avoid any kinds of corruption. The higher education sector should also provide skill development training for school administration in order to develop competence and should minimize political interference.*

**Key words-** Governance, Good governance, Accountability, Transparency, Service Quality, Responsiveness, Efficiency and Effectiveness

# **INFLUENCES OF CONTINUOUS ASSESSMENT PRACTICES IN IMPROVING STUDENTS ACADEMIC ACHIEVEMENT AT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY ASHEBIR ZEKARIAS  
ADVISOR: ASHEBIR BEZABIH (PHD)**

## **ABSTRACT**

*The main purpose of this study was to investigate the influences of continuous assessment practices in improving students' academic achievement at secondary schools of Wolaita Zone. In order to meet the objectives of the study, triangulation mixed methods design was employed. The study employed both quantitative and qualitative research methods to investigate the current status of continuous assessment practices in secondary schools of Wolaita zone, to assess the extent to which continuous assessment practices influence improvement of students' academic achievement in secondary schools of Wolaita zone and to identify the challenges of continuous assessment practices in secondary schools of Wolaita Zone. Five Woredas and One administrative city were addressed by this study. The study employed both primary and secondary data sources. Primary data was collected through questionnaire, semi-structured interview and focus group discussion from 295 sample respondents. The sample respondents were selected by using simple random and availability or purposive sampling techniques. To get secondary data, all available documents were reviewed. The study used simple random and availability or purposive sampling technique in order to select the sample respondents. Data obtained through questionnaires were analyzed using descriptive statistical tools like percentages, mean scores, standard deviation and aggregate mean. Moreover, data gathered through semi structured interview, focus group discussion and document analysis were analyzed to triangulate the data obtained through questionnaire. The finding of this study revealed that currently continuous assessment is going as expected; it plays a vital role in improving teaching learning process, enabling students to build the whole mind and master the content, arousing students desire for attention and concentration while in class, and helping students to perform better in final examination in the schools and it was affected by different challenges such as lack of infrastructure, large class size, lack of teaching learning materials, lack of safe and conducive school environment and lack of smooth relationship between teacher and students. Based on the findings, it was concluded that continuous assessment practices were appropriately implemented currently, it highly influence students' academic achievement as well as teaching learning process as well as it was challenged by different factors stated above. In line with the above findings and conclusion, the researcher recommended that the school leaders, Woreda education office, Zonal education desk, and educational stakeholders generally should motivate teachers who currently implement CA, encourage CA practices in order to sustain students achievement and also they should be actively involved in budgeting the sector with adequate finances, fulfilling the required instructional materials, creating smooth relationship between teachers and students, motivating and rewarding better performed students, and making schools conducive to instructional process in order to improve students achievement.*

# **IMPLEMENTATION OF ACTIVE LEARNING IN GEOGRAPHY SUBJECT IN GOVERNMENT SECONDARY SCHOOLS OF GOFA ZONE**

**BY: EYASU CHORA TONA**

**ADVISOR: MARY THUO (PHD)**

## **ABSTRACT**

*The aim of this study was to assess the implementation of active learning in Geography subject. To meet the objectives, the study used a descriptive survey research design with mixed research approaches (quantitative and qualitative) for data collection and analysis. The study tried to answer the following specific objectives; 1) To assess the views of participants regarding active learning implementation in geography subject in governmental secondary schools, 2) To determine if there is a deference between participants' responses on factors that influence the implementation of Active learning for geography subject, 3) To identify factors that relate with implementation of Active learning approach in geography subject and 4) To identify the major challenges that hinder implementation of active learning in geography subject. The study focused on Demba Gofa, Oyda and Geze Gofa woredas and Sawula administration town. Data were collected from 5 schools (Mishakare, Shafite, Bulik, Duza Melese Zenawi and Sawula secondary) by using simple random sampling method. Regarding to sample size, the study participant included teachers (37), student (87), principals and vice principals (16), supervisors (5) and woreda education head (4) who were selected purposefully, and interview participants were included based on availability. Data collection instruments were questionnaire for both teachers and student. Besides principals, supervisors and woreda education office heads were interviewed and observations guidelines were used to supplement the data obtained through questionnaire. Data analysis were conducted by using both descriptive statistics (percentage, frequency, mean and standard deviation) and inferential statistics (t-test and correlation) by using of Statistical Package for Social Science (SPSS)) version 23. Qualitative data were summarized, using content analysis approach. Moreover, the finding noticed lack of resource availability, motivation, teaching methods, class management, ineffective implementation of active learning, classroom supervision, teachers' commitment, attitude, class size, in-service training, inadequate professional teachers assigning, extracurricular activities and lack of confidence as the major holdbacks to practice the implementation of active learning. Based on the major findings, it was recommended that all stakeholders should practice their responsibility and they should create convenient environment for implementation of active learning in geography.*

**Keywords:** Active learning, Geography, group work, Secondary Schools, Gofa zone, Ethiopia

# **PRACTICES AND CHALLENGES OF EDUCATIONAL MATERIAL UTILIZATION IN GOVERNMENT SECONDARY SCHOOLS OF SILTE ZONE, SOUTHERN NATION NATIONALITIES AND PEOPLES' REGION**

**BY: MEZID RAMETO MOHAMMED**

**ADVISOR: TAFANO OUKE (ASSO.PROF.)**

## **ABSTRACT**

*This study made its objective to be assessing the practice and challenges of educational materials utilization in selected government secondary schools in Silte Zone. It was concerned with material utilization practices (such as storage, maintenance, controlling, distribution and disposal), challenges faced for utilization of educational materials, views of stakeholders on the utilization of educational materials, and participation of stakeholders on the practices of educational materials utilization. To meet already stated objective descriptive survey design is used to carry out this study. This is so because the design helps to obtain first-hand information from multiple sources. These were academic and administrative staff. As of study areas, 3 Woredas and 2 city administration, and 5 schools were selected by quota system. Respondents were selected by purposive sampling technique due to their direct relation with the issue under study and also to gain sufficient information. Availability and simple random sampling techniques were also employed. The data was collected through questionnaire, interviews and document analysis. Data gathered through questionnaire were quantitatively analyzed using SPSS version 20 frequency, percentage, mean, t-test and multivariate regression whereas the data gathered through interview and document analysis were qualitatively analyzed. Having gone through these all the study found out that storage, maintenance, controlling system and distribution has a significant effect on material resource utilization in Silte Zone secondary schools and Low expectation among stakeholders, Participation of stakeholders in materials utilization practices was less. The study also revealed that the major challenges identified were poor controlling system, poor maintenance, inadequate distribution and storage. The disposal of obsolete material was found to be insignificant, which has invisible effect on material resource utilization. Based on these findings, it is found legitimate to forward some recommendation. Therefore; capacitating professionals' through training assist users in putting these materials in to effective usage, To provide strong, consistent support and creating appropriate awareness for the schools community, To involve stakeholders exercise their rights and obligations, and educational materials are run by an independent plan in the secondary schools of Silte Zone.*

# **THE PRACTICE OF SCHOOL IMPROVEMENT PROGRAM ON SCHOOL EFFECTIVENESS IN GOVERNMENT SECONDARY SCHOOLS OF KEMBATA TEMBARO ZONE**

**BY: ABRAHAM HELENA**

**ADVISOR: FRANSUA DALACHA (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess the practice of school improvement program on school effectiveness in secondary schools of Kambata Tembaro Zone. In order to achieve this purpose, descriptive survey research design and both quantitative and qualitative methods were employed. Simple random sampling and purposive sampling techniques were used. Among the 36 government secondary schools found in the Zone, 10(30%) were taken as a sample by using simple random sampling technique. Then, 120 teachers were selected using random sampling techniques whereas 20 SIP committee members and 10 school principals were selected by purposive sampling. Questionnaire was the main instrument of data collection. Interview and document analysis were also utilized to substantiate the data gained through the questionnaire. Percentage, mean and standard deviation were employed to analyze the quantitative data, while qualitative data which was obtained through open ended questions, interview and document analysis were analyzed using narration. The findings of the study revealed that, the preparation made for SIP implementation for school effectiveness and SIP domain practices were not satisfactory. Students' participation in various clubs was not adequate and the performance of students was not reported to the parents on a regular base, there was no team spirit in school stakeholders, and the principals have not open and transparent relationship with school communities. From the result of the findings, it is possible to conclude that, there was gap between policy intentions and actual practices. Finally, recommendations were drawn based on the findings; this include: preparing adequate awareness creation program to ensure practical involvement of all stake holders, organizing and allocating the necessary resources, providing proper technical support and practical training to support the implementation of school improvement program. principals should be committed to report the performance of students' to the parents regularly for the school effectiveness.*

# **LEADERSHIP CONTRIBUTIONS FOR STUDENTS' ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS OF GOFA ZONE**

**BY: DAWIT DEJENE**

**MAJOR ADVISOR: DEMISSIE DALELO (PH.D.)**

## **ABSTRACT**

*The purpose of this study was to investigate leadership contribution for student's academic achievement in the secondary school of Gofa zone. To this end, a mixed method research design was used for the study and both quantitative and qualitative methods were used for data gathering. Data were gathered from ten secondary schools. The sample sizes of the study were 80 teachers, 70 students' representatives, 21 school leaders, 4 cluster supervisors and 15 PTSA. Data collection instruments were questionnaire, interview and document analysis. The data gathered through close ended questionnaires were analyzed using mean and t-test used by SPSS version 20. Interview, observation and document analysis were discussed using narrative description which was qualitative method of analysis. The main findings of the study indicated that the contributions of school leaders were insignificant means they do not play their role effectively towards enhancement of students' achievement. Based on the findings, it can be concluded that school leaders were not effectively playing their leadership roles as educational leaders due to limitations of capacity and other resource constraints found in the school. Finally, it is possible to recommend that the woreda education office, zone education department and Regional education bureau to improve leaders' competencies providing facilitate wide leadership training for selected government first cycle secondary school leaders in possible ways by service training in order to fill the problem and enhance the leaders' capacity to improve students' academic achievement in their school.*

Keywords: Leadership, academic achievement, contribution,

# **PRACTICES OF CLUSTER BASED SUPERVISION IN SECONDARY SCHOOLS OF GOFA ZONE**

**BY: ALEMIE ADISSIE**

## **ABSTRACT**

*The purpose of the study was to assess the status of cluster-based supervisory practices and problems in public secondary schools of Gofa Zone. A descriptive survey design of research methodology was employed. Regarding sampling, five clusters of secondary schools were selected using purposive sampling techniques. Having these cluster schools 126(50 %) teachers was selected out of 356 teachers and 25 (50%) department heads was selected out of 50 department heads using simple random sampling techniques through lottery methods. On the other hand 5 woreda education office supervision coordinators, 5 principals and 15 vice principals were selected using availability sampling techniques as they are highly responsible for cluster supervisory practices and their number was also manageable. The main instruments used to collect data were questionnaire, interview and document analysis. The gathered data was organized by frequency, mean and one sample t-test result. Open ended questions, interview and document analysis were discussed using narrative description which is qualitative method of analysis. The major findings of the study indicated that majority of respondent teachers' reported that cluster based supervisors did not play the role expected of them in observational activities (pre, during and post); supervisor perform their supervisor y roles at secondary y schools of Gofa Zone are insufficient and ineffective implantation. In addition, the study revealed that the implementation of cluster based supervision was affected by - lack of qualified and sufficient manpower; shortage of school finance; lack of relevant supervision checklist; cluster based supervisors were not taken relevant trainings and they were overburdened with many tasks. Therefore, it may be concluded that cluster based supervision practices did not promoting professional competence of teachers. With teachers in order to plan their task and examine the planned tasks, there is no close Likewise, it may concluded that cluster based supervision committee members / principals, vice principals and department heads did not followed procedures of classroom observation steps properly .It is possible to recommend that cluster- based supervisors should follow procedures of classroom observation steps properly. Furthermore, there should be clear guideline to handle the process of cluster based supervision at school levels and sufficient resources should be allowed to teachers to carry instructional supervision, there should be standardized instrument to collect information at the time of classroom observation. Finally, to minimize the problems of school-based supervision in secondary schools, it is recommended to give relevant in-service trainings for supervisors to upgrade their supervisory activities, necessary resources such as supervision manuals and an adequate budget for the success of supervision at the school level was suggested.*

# **PRACTICES OF TEACHERS' PARTICIPATION IN DECISION ON SCHOOL LEADERSHIP: A COMPARATIVE STUDY BETWEEN URBAN AND RURAL SECONDARY SCHOOLS IN WOLAITA ZONE**

**BY: GIRMA DENEK**

**ADVISOR: MARY THUO (PHD)**

## **ABSTRACT**

*This study examined the practices of teachers' participation in decision making on school leadership between urban and rural secondary schools in Wolaita zone. To achieve the objective of the study, descriptive survey research design with mixed approaches were employed. The study focused on distinguishing areas of teacher's participation, the extent of leaders facilitation on teachers' involvement and challenges of school leaders involving teachers in decision making. The study was conducted with government secondary schools in Wolaita zone. The sample was composed of 66 rural 112 urban teachers and 6 rural school principals and 6 urban school principals. Purposive sampling method was used to select schools and teachers while principals were included based on availability. Data were collected using questionnaire, interview and documents sources. Data gathered through questionnaire were analyzed using percentages, weighted mean, standard deviation, and independent sample t-test used by computing the data on SPSS Version 20. Data obtained through interview and document analysis were qualitatively analyzed. The result shows that urban and rural teachers' involvement in all areas of school decision-making was medium. Principals/leaders' ability in facilitating the environment for teachers participation was low especially at rural schools. Finally, leadership style by principals, lack of trust and positive relationship between teachers and principals, teachers belief on decision making and leaders concern of his/her power and authority were some of the factors that were found to impeded involvement in decision-making at both rural and urban schools. It was thus concluded that teachers' role in school decision-making was not being given due emphasis in the study area. The study suggested school leaders have to practice various leadership styles, equip themselves with various skills, training teachers on their additional responsibilities, recognize teachers with exemplary performance in their profession and participation in decision, communicate and develop the sense of transparency were some of the major recommendations forwarded in order to improve teachers' involvement in both urban and rural school decision making.*

**Key-words:-Decision-making, participation, leadership, teachers, principals, urban, rural.**

# **PRACTICES AND CHALLENGES OF INSTRUCTIONAL SUPERVISION IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: ADDISU ASHA DARGASO**

**ADVISOR: ASHEBIR BEZABIH (PH.D)**

## **ABSTRACT**

*The purpose of this study was to investigate the practice and challenges of instructional supervisors in Wolaita Zone Government secondary schools. To conduct this study, three basic research questions were formulated. A mixed methods research approach was employed in this study. Seven woredas and nine secondary schools found in these woredas were selected through simple random sampling. Nine school principals and 18 vice principals, 9 unit leaders, 7 secondary school cluster supervisors, 7 Woredas Education office experts, were selected by using available sampling techniques. Furthermore, 199 teachers participated in the study selected through simple random sampling technique. Questionnaire was prepared for teachers and school leaders. Interview and document analysis were also used to triangulate the quantitative data. Frequency, percentage, standard deviations, means and independent sample t-test were utilized to analyze quantitative data gathered through the questionnaires. The result of the study indicated that the implementation status of instructional supervision in the sample school was low. Instructional supervisors did not encourage teachers to work cooperatively towards their professional growth and teachers did not gain professional support from instructional supervisors in order to improve their instructional skills. Besides, poor funding for instructional supervision, shortage of time to support each teacher's pedagogical needs, shortage of basic facilities for instructional supervisor, shortage of training on updated supervisory approaches and skill gap of supervisors were major problems identified. To alleviate problems regular trainings should be given for instructional supervisors by Woreda Education office and Wolaita Zone Education Department. In addition to these; instructional supervisors should give professional support to teachers in order to improve their instructional limitations, organize teachers to conduct peer observation/collegial supervision /among themselves, and allocate the necessary budget.*

# **PRACTICES AND CHALLENGES OF DIVERSITY MANAGEMENT TO ENSURE EDUCATIONAL EQUITY IN SOME SELECTED SECONDARY SCHOOLS OF JIMMA ZONE**

**BY: NEGA DEMISSIE**

**ADVISOR: DEREJE DEMISSIE (PHD)**

## **ABSTRACT**

*This study was conducted to investigate the current practices and challenges of diversity management to ensure educational equity in secondary schools of Jimma zone. To carry out this study, descriptive survey design along with mixed method was employed. Participants of the study were 88 teachers and 16 school leaders. They were selected by using simple random sampling and optimal sampling method respectively. The data were collected by using questionnaire, interview and document analysis. Data collected through questionnaire were analyzed and summarized using statistical tools such as frequency, percentage, mean and standard deviation while qualitative data were analyzed using content analysis approach. The findings of the study indicated that the practice of secondary school creating effective diversity management was low. Due to this, the status of practice on creating school diversity management was not satisfactory. The study also shows that, poor relationship between the school leaderships and teachers of the school, teachers believe that school leaders are the only person responsible to maintain effective school diversity management, and the presence of multicultural background of the students were internal challenges that hindered the creation of effective diversity management. Whereas, the interferences of external bodies and lack of support from woreda education office, were revealed as one challenge that hindered the creation of school diversity management. Based on the major findings, providing short term trainings, providing funds, active participation of stakeholders, empowering governing body, building stakeholder relationships sharing common vision and mission were recommended to create and enhance effective diversity management in the study area.*

**PRACTICES AND CHALLENGES OF SCHOOL BASED  
SUPERVISION ON PROFESSIONAL DEVELOPMENT OF TEACHERS  
IN GOVERNMENT PREPARATORY SCHOOLS OF BUNO BEDELE  
ZONE, OROMIA REGIONAL STATE**

**BY: MURTESSA BECHERE**

**ADVISOR: SOLOMON L (PHD)**

**ABSTRACT**

*This study was conducted to assess the practice and challenges of school based supervision in BunoBedele zone. To study the problem, four basic research questions were drawn. The focus of these research questions was teachers understanding about school based supervision practice, professional preparation of school supervisors; how supervisors employ procedure of classroom observation in a class and working conditions of school supervisors. To conduct the study, descriptive survey design was employed. Random sampling technique was employed to select the sample Woredas, schools and teachers, school leaders (principals and school supervisors) selected purposively. Questionnaire was the main data gathering instrument for this study. Thus, 64 teachers and 15 school leaders were filled the questionnaire. One zonal education coordinator, five Woreda Education Officers, 15 school leaders and 10 PTSA, totally 31 participants were interviewed. The aim of the questionnaire and interview analysis were to elicit information regarding: the practice and challenges of the school based supervisors play, the practice of teachers in the supervisory practices, the perception of teachers and supervisors about school based supervision, the major problems that affects school based supervisory practices and the possible efforts being made to improve the potential problems. The finding showed that teachers were not oriented about the activities, teachers not well aware of the significance of school-based, they were not Facilitating induction training; not improve the way of observing teachers in the class for instructional improvement; not Supporting teachers in doing action research, in service training were not arranged for supervisors, supervisors have not taken induction training, lacked support instruments and experience sharing, school supervisors were not qualified enough to give the required service and lack support instruments like updated manuals and guides. Absence of enough materials to support school, teachers are resistant against the supervisory activities, insufficient allocated budget for the supervisory program in the school, the negative perception of teachers towards supervision are the major ones. Finally, to minimize and if possible to solve the problems, the following recommendations were drawn: arranging short term refresher training and discussion forums; providing professional on the job training, experience sharing and updated manuals and guides for school supervisors; and providing a means of transport and other basic resources for school supervisors; and conducting further investigation regarding factors that impede supervisory practice.*

# **TEACHERS' JOB SATISFACTION AND THEIR COMMITMENT IN GENERAL SECONDARY SCHOOLS OF BUNO BEDELE ZONE**

**BY: TEMESGEN ABEBE**

**ADVISOR: HABTAMU GEZAHEGN (PHD)**

**CO-ADVISOR: TAFANO U. (ASSO. PROF)**

## **ABSTRACT**

*Under this study, a mixed-methods sequential explanatory design was used. In the quantitative phase, the data collection was done by means of a self-constructed structured questionnaire that focused on four work factors that were identified during the literature review, namely salary and benefits, management, work characteristics, and interpersonal relationships. The data were statistically analyzed using the Statistical package for Social Sciences (SPSS) computer software programme and the results were appropriately interpreted. In the second, namely the qualitative phase, interviews were conducted with a sample of 4 supervisors and 4 principals who were purposefully selected because they are currently more related to the problem. The results of the study indicated that teachers were significantly dissatisfied with most aspects of their work. Salary and benefits emerged as the primary dissatisfying aspect of all the work factors. Other areas of dissatisfaction related to poor fringe benefits and opportunities for promotion, the management style of the principals, the lack of decision-making opportunities for the teachers, as well as the opportunity to develop personally, and the poor relationships teachers have with the principals and the parents. Therefore, it was recommended that the stake holder should provide different intrinsic and extrinsic rewards in order to increase teachers' job satisfaction and organizational commitment; such as creating environments which allow teachers to make additional financial benefits by doing extra hours, and appropriate compensations for teachers' extra workload. It was also recommended that providing an appropriate level of autonomy and recognition, effective supervision, and good prospects of promotion opportunities might raise teachers satisfaction and commitment; especially for senior and better educated staffs. Finally, further studies on job satisfaction and organizational commitment were recommended. Besides that, extra recommendations were made in order to enhance the job satisfaction of secondary school teachers in Buno Bedele Zone, and for further research.*

# **PRACTICES AND PROBLEMS OF RESULT ORIENTED TEACHERS' PERFORMANCE APPRAISAL IN SECONDARY SCHOOLS OF JIMMA ZONE**

**BY: TADELE KENATE**  
**ADVISOR: HABTAMU GEZAHEGN (PHD)**  
**CO-ADVISOR: DR. ABRAHAM**

## **ABSTRACT**

*Result oriented teachers' performance appraisal (ROTPA) has been implemented in Jimma Zone. In addition to this, an approach to result-oriented teacher performance measurement known as Balanced Score Card (BSC) was also introduced. Because of this, principals, vice principals and teachers have face problems in its practice. So the purpose of this study was to investigate how teachers and principals have been practicing the current teachers' performance appraisal criteria and what major problems were encountered. The research was conducted in general secondary schools of Jimma zone zone across 8 woredas based on randomly and purposefully selected government secondary schools out of which, 102 teachers were also selected by simple random sampling techniques in 32 school leaders were selected based on optimal sampling techniques. The research design employed is mixed approach that includes both Quantitative and qualitative sources of data. A survey questionnaire of both closed and open ended questions were designed and distributed to 102 teachers and 32 school leaders and Woreda educational office heads also included in the study for interview. Documents like teachers' summative evaluation report and ROTPA training manual were also analyzed. Data collected through survey questionnaire was tabulated in tables and expressed in simple statistical tools, Percentage and mean test, standard deviation with inferential statistic t-test and p-value to compare two ideas of group respondent is used to describe what portion of respondents agree or disagree on the given items. Data collected through open ended questions, documents analysis and interview were presented in narrative forms. The findings of the study revealed that teachers, principals and vice principals did not develop favorable attitude towards ROTA criteria based on the BSC system that focuses on business matters. Teachers were not fully involved in developing appraisal criteria. The appraisers were interpreted less, competent enough to appraise teachers' performance objectively; the formative evaluation was not based on teachers' future performance. Most of the school principals and vice principal didn't Conduct post appraisal conversation with all teachers being appraised. The research also revealed the following as a major problems of ROTPA, based on BSC, characterized by in adequate training given to teachers, principals and vice principals, ROTPA criteria neglected teacher behavior, the normal distribution curve was not in line with school environment, teachers were appraised by the vice principals and principal, no grievance committee was formed at school level. The participation of PTAs and students was very low. Giving reward and increasing salary in accordance with result oriented performance, avoiding or improving unachievable performance standards and making them flexible and achievable under normal condition, implementing normal distribution curve in line with school environment and appraising teachers performance based on performance output rather than performance outcome are recommended to improve the practice of ROTPA based on BSC and can solve the problems revealed.*

# CONTRIBUTION OF TEACHERS' PARTICIPATORY DECISION MAKING ON THEIR JOB SATISFACTION IN SECONDARY SCHOOLS OF WOLAITA ZONE

BY: BUSHURA CHOLO AGIRO  
ADVISOR: DEMISSIE DALELO (PHD)

## ABSTRACT

*The main purpose of this study was to investigate the contribution of teachers' participatory decision making on their job satisfaction in secondary schools of Wolaita Zone. The study design employed in this study was sequential triangulation, which was supplemented by quantitative and qualitative method. The sampling technique used in the study was availability and simple random sampling technique. The sample size was 9 secondary schools, 232 teachers, 9 main principals and 6 supervisors with the total of 247 participants included in this study. The data gathering instruments were questionnaire and interview. The participants of interview were supervisors and main principals. Questionnaire was administered to 232 teachers of which 227 of them were properly filled and returned. The collected data were analyzed using both qualitative and quantitative methods of data analysis by using descriptive and inferential statistics. Lack of training in schools towards decision making and support, lack of transparency on decision making, absence of participatory and democratic school leadership and lack of trust between teachers and principals were some of the challenges that were found to have impeded participatory decision-making. The results indicated that the teachers were significantly dissatisfied with most aspects of their work. Salary and benefits emerged as the primary dissatisfying aspect of all the work factors. Other areas of dissatisfaction related to poor fringe benefits and opportunities for promotion, the management style of the principals, the lack of decision-making opportunities for the teachers, as well as the opportunity to develop personally, and the poor relationships teachers have with the principals and the parents. The findings indicate that a significantly positive correlation was found to exist between job satisfaction and participation in decision-making. The findings showed that there were different ways in which teachers participated in decision making at the secondary schools which included general meetings, departmental meetings, club meetings, teacher's council and delegation. The result also showed that participation in decision making by teachers had effects in their levels of job satisfaction as, it gives them a chance to contribute to the school's objectives, gives them a sense of trust and control in their work, gives them a sense of pride and unity among the teachers and the principals and it makes them feel valued that their views are considered by the school management. The stakeholders should endeavor to formulate policies that enhance teacher participation and involvement in decision-making as this will help create a motivated and satisfied workforce in schools. Further empirical studies can be done on the influence of teachers' participation in decision making on their performance in secondary schools. However, future researchers can replicate this study in private schools since its findings were limited to public schools.*

**Key Words: Decision making, Contribution, Job satisfaction, Participatory**

# **SUPERVISORY PRACTICE AND CHALLENGES OF CLUSTER SUPERVISORS IN PRIMARY SCHOOLS OF MAJANGE ZONE, GAMBELLA REGIONAL STATE**

**BY: ASHENAFI GETACHEW**

**ADVISOR: ASHEBIR BEZABIH (PHD)**

## **ABSTRACT**

*The purpose of this study was to investigate the practice and challenges of cluster supervisors in Majange Zone primary schools. Mixed research method design was used in this study. Two woreda, 2 woreda education office heads, 2 woreda education office quality assurance core work process officers under sample woreda, 6 primary school cluster supervisors and 25 principals were selected through purposive sampling technique. Furthermore, 187 teachers participated in the study by using simple random sampling technique. Questionnaire was prepared for teachers and principals. Interview and document analysis were also used to validate the data gathered through questionnaires. Frequency, percentage, standard deviation, means, and independent sample t-test were utilized to analyze quantitative data gathered through the questionnaires. The findings of the study revealed that the status of cluster supervisors for the improvement of students' academic achievement was insufficient: supporting school's management during planning; facilitating community participation; training school principal: solving various management problems: cluster supervisors did not perform activities in relation to facilitating teachers' professional development through giving short term training, work shop and coaching at school levels in promoting teachers professional development was insignificant. Based on the above findings, it can be concluded that the status of cluster supervisory practices in the study area was insufficient and cluster supervisors were not focus on promoting teachers professional development in the area. Finally, to minimize and if possible to solve the problems, the following recommendations were drawn: arranging short term refresher training and discussion forums; providing professional on the job training, experience sharing and manuals and guides for cluster supervisors; supervising far away schools from cluster centers by WEO and providing a means of transport and other basic resources for cluster supervisors; and conducting further investigation regarding factors that impede cluster supervisory practice.*

# PRACTICE AND CHALLENGES OF COOPERATIVE LEARNING IN SECONDARY SCHOOLS OF KONTA SPECIAL WOREDA

BY: BAHIRU KORICHO

ADVISOR: - ANTENEH WASYHUN (PHD)

## ABSTRACT

*The main purpose of this study was to examine the practices and challenges of cooperative learning in secondary schools of Konta special woreda of SNNPR. To this end, descriptive survey research design involving mixed research method was employed. As a result, sampling was carried out through both simple random and availability sampling techniques. Thus, 3 secondary schools were selected from the study area. Data were collected from 5 principals, 65 teachers and 116 students of selected schools through questionnaires, interview as well as classroom observation. The collected quantitative data were analysed using percentage, mean and t-test whereas qualitative data were analysed with themes and categories. According to the research findings: there has positive attitude to both students and teachers in the implementation of cooperative learning. Moreover, majority of the respondents agreed on; teachers should know the essential strategies of CL and it makes students responsible for their learning for successful teaching learning process but the practice and way of planning the implementation of cooperative learning in the sample schools were found to be low. Lack of awareness and interest on cooperative learning, inability of teachers to share responsibility for each group member, considering CL as a politically motivated issue and consider cooperative learning as a time killing activity on some students were identified as major challenges in this study area. Even though improving teachers' attitude and supervisors' ability to support cooperative learning, providing reward for students and teachers and continuous training about CL for teachers through CPD was promising strategies to be taken place on target schools. Based on the findings of the study the study concluded that; CL is opportunity to students' to share learning challenges with group mates, make them responsible for their learning and the teachers can identify the essential strategies for successful teaching learning process. Furthermore, it is better to use cooperative learning as one of scientific method of instructional process; they should have to related cooperative learning with the education theory rather than wrongly associate with political agenda. To overcome these problems, the study recommended, designing jointly training and retraining of principals and teachers given by the WEO, REB and NGO's. Furthermore, teachers should have understood and stand to go well for effective planning and implementation of cooperative learning. Besides this, students should be recommended to aware and fully understand the purpose and use effective implementation of CL. Finally, the officials and cluster supervisors should have better communication with teachers and students in order to know about their concerns and offer timely assistance and feedbacks as necessary.*

**Key words:** Cooperative learning, active learning, student's achievement

# **MAINTAINING STUDENTS DISCIPLINE IN GOVERNMENT PREPARATORY SCHOOLS OF WOLAYTA ZONE, SOUTHERN NATION NATIONALITIES AND PEOPLES REGION**

**BY: ABRHAM ASALE CHINASHO  
ADVISOR: TAFANO OUKE (ASS. PROFESSOR)**

## **ABSTRACT**

*The purpose of the study was to maintain the extent of students discipline in government preparatory school of Wolaita zone. To this end, a descriptive survey research design and inferential statistic by using independent sample group t-test and correlation were used for the study Both quantitative and qualitative methods were used. Questionnaires containing close ended and open-ended questions were designed and distributed to four groups of stake holders. Interview was also conducted with the preparatory school students. Where as, preparatory school discipline committee were focus group discussion. The population of the study was 69 teachers, 47 school leaders, 12 members of School discipline committee and 12 preparatory school students in Wolaita zone. The sampling techniques used were simple random, purposive and availability sampling were used. Interview, focus group discussion and documents analysis were discussed using narrative description which is qualitative method of data analysis. The p-values for the correlation between political, social and economic factors cause disciplinary problem of school disciplinary problems. Moreover, The finding implies that school disciplinary problems related to family/home causes disciplinary problem has a strong correlation. The p-values for the correlation between school causes disciplinary problem, and school disciplinary problems in study areas. The data was analyzed using SPSS 20 and count. The finding concluded that, measures that should be adopted to improve enforcement of existing rules and regulations in preparatory schools doesn't measure It was indicated that rewarding discipline seems to be wastage of resources; this motivates the students' which must be negatively in fluencing student discipline. The study revealed that, the preparatory schools rarely organizes for motivational talks. The preparatory schools facilitated motivational talks are not frequent. The finding revealed that major challenges of inhibiting disciplinary behavior among students in preparatory schools didn't well practice. In conclusion, preparatory school students discipline problems were lack of money. There was significance difference between the opinions of teachers and school leaders. Even though, it can be concluded that preparatory school students discipline problems was lack of parental care sample study of preparatory schools. The independent sample t-test revealed that the significance level ( $p=0.000$ ) is less than 0.05 this shows there is no significance difference between Teachers and school leaders views regarding lack of parental care sample study of preparatory schools of Wolaita zone. Finally the following major recommendations were made: A whole some approach to manage students discipline should be adopted by all the school administrators and managers, Each school should have a set of rules and regulations that will guide all actions and in-actions of the students during school hours and should be constantly read to the hearing of all students. Fur ther more, the causes of disciplinary problems are addressed if teaching staff are actively in volved in the teaching programs of their school. This wil lead to active participation of the students which subsequently confine their frivolities.*

# **PRACTICES AND CHALLENGES OF INSTRUCTIONAL LEADERSHIP IN GOVERNMENT PRIMARY SCHOOLS OF KAFFA ZONE**

**BY: HABTAMU GIRMA T/MARIAM**

**MAJOR ADVISOR: TAFANO OUKE (ASS. PROFESSOR)**

## **ABSTRACT**

*The purpose of the study was to identify the instructional leadership practices and challenges in government primary schools in Kaffa zone. Concept of instructional leadership in the study emphasized on collegial classroom observation and specifically focuses on support, guidance, and encouragement of reflective teaching. Leadership for instruction emerges from both the principal and the teachers. In this thesis, lead teachers, the assigned cluster supervisor and principals are part and parcel of the instructional leadership of schools, since they all are needed to involve in providing support for novice collaboratively at various level. Current trends appear to indicate that there is a quality challenge still left unsolved in primary education of kaffa zone. Often the school leadership implement identical supervisory approach for all teachers' despites the fact that some approaches are suited to particular situation. The study strived to answer the extent of instructional leadership involved in supervision in providing supervisory support at different level of experience, and the challenges. Total population of the study was 335. Samples selected with simple random for teachers and purposive sampling techniques for school leaders and supervisors. 115 respondents for the questionnaire and 4 respondents for the semi-structured interview questions were selected. Standard questionnaire and open ended questions, and interview were employed for data collection. Frequency, percentage and mean were used for data analysis and interpretation. The finding of this study revealed that almost all instructional leaders were subject specialists, lacks skill and training and lacks commitment and moral to accomplish their tasks. Based on the findings, it was concluded that: schools were some extent incapable of enhancing teachers' professional skill development and improving the quality of education. The stated vision and defined mission in the school did not command the ownership of its potential stakeholders since it was not supported by its potential stakeholders. Instructional leaders did not possess the required skill, knowledge and attitude through training. In line with the above findings and conclusions it was recommended that; to equip instructional leaderships with necessary knowledge, attitude and skills the region, zone and woreda education officials may arrange workshop training.*

Key words: leadership; instructional leadership; supervision

**PRACTICE AND CHALLENGES OF FEMALE STUDENTS  
PERFORMANCE IN GOVERNMENT SECONDARY SCHOOLS OF KAFA  
ZONE, SOUTHERN NATIONS NATIONALITIES AND PEOPLES  
REGIONS**

**BY:MEBRATE MAMO MERIGA  
MAJOR ADVISOR: TAFANO OUKE (ASS. PROFESSOR)**

**ABSTRACT**

*The purpose of this study was to assess practice and challenges of female students performance in government secondary schools of kafa zone. A descriptive survey research design was employed .The method of study was both qualitative and quantitative. The objective of the study was to assess practice and challenges of female students. Six sample schools were drawn from eighteen secondary schools of woredas that were selected through simple random sampling technique. Data for the study was collected though questionnaire, interview and document analysis. One hundred fifty-five female students were selected by simple random sampling techniques for questionnaire and six secondary school principals and six PTSA member representatives were selected through available sampling technique for structured interview questions. The data collected was analyzed by using percentage. The findings of this study revealed that Schools were far away from the home of students, lack of teachers motivation to participate female students in the class room, most schools had no guidance and counseling service in their school, most school administrative and teachers did not motivate female students when they achieve high score, lack of reading class for female students, less educational support from families, less encouragement of families when they achieve high score, over load at home for female students, less communication of families on female students' academic achievement with teachers, low level of families' educational back ground, attitudinal problems of families on female students' education, poor studying habit and poor time management, peer pressure and low motivation for learning, majority of students missing class attendance, majority of the students did not do their home work properly and less of reading program at home. From the findings, it was recommended that, teachers should focus on female students' class room participation, schools need to have guidance and counseling service, the school administrative and teachers should motivate female students in different ways to improve their academic achievement, tutorial class should be built by collaboration of school principals and concerning stakeholders, family of female students' should support their education to improve their academic achievement, family of female students' should encourage them to improve their academic achievement, the family of female students' should reduce overload at home, teachers and family should communicate on their academic achievement, school principals, teachers and another concerning body should make creation on importance of female education, teachers should communicate with female students' family on teaching female students, teachers and families should focus on female students' studying habit and time management, families of female students should focus on peer pressure and motivation of learning, families and teachers should communicate on female students' class attendance, family and teachers needs to follow female students to do their homework properly and family reduce overload and prepare reading program at home.*

# **COMPARATIVE STUDY OF PRINCIPALS' PERFORMANCE IN INSTRUCTIONAL LEADERSHIP IN GOVERNMENT PRIMARY SCHOOLS OF WOLAITA ZONE**

**BY: MESERET MENGISTU MENTRO**  
**ADVISOR: DIMO DIDANA (ASST. PROF.)**  
**ABSTRACT**

*This study was conducted in order to compare principals' performance in instructional leadership in primary schools of Wolaita zone. In order to achieve the general and the specific objectives of the study, descriptive survey research design was employed. Mixed (qualitative and quantitative) research methods used to collect and analyses data. By stating the existing problems the researcher formulated four basic questions. Those are; To what extent principal's perform the instructional leadership role in primary schools of Wolaita zone? Which management functions is/are challenging both groups of leaders in the study areas? To what extent do both principals support practice with theory to improve their performance in study areas? What challenges both leadership principals face while leading instruction in study areas? The researcher took ten government primary schools, five Woreda education offices heads were selected by simply randomly sampling techniques. 80 primary school teachers were selected by stratified sampling while 10 school principals, 5 supervisors were selected by purposive sampling techniques. 5 Woreda education offices were selected by available sampling techniques. Two data collection instruments questionnaires and interviews were used to collect data. Questionnaires were provided for teachers and principals but interview was provided for both supervisors and woreda educational office heads. The data gathered through questionnaires were analyzed using percentages, mean, standard deviation, and weighted mean in this study. The findings of the study revealed that principals' performance in instructional leadership was moderate while the extent to which they support practice with theory is moderately low. Only a small percent of principals provide support in decision making, direct, organize, and manage school functions/activities. Major challenges observed in this study were, lack of budget, interference with politics, and lack of stakeholder commitment. In order to improve quality of education performing principals were blood vessels. To achieve education quality, it was better to improve performance of principals in government primary schools.*

# **THE PRACTICES AND PROBLEMS OF EDUCATIONAL MATERIAL RESOURCE MANAGEMENT IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: -LAKECHLABENA**

**ADVISOR: - ENEDALE BERHANU (ASST.PROFESSOR)**

## **ABSTRACT**

*The study carried out with the objective of the practice and problems of educational materials resource management in selected government general secondary schools in Wolaita zone Town administrative schools . It was concerned with material management functions (such as, planning, purchasing distribution, controlling etc), challenges faced for effective management of educational material and implementation of policies and guidelines. To meet already stated objective descriptive survey design is used to carry out this study. This is so because the design helps to obtain first hand information from multiple sources. Four groups of respondents were participated in the study. These were academic and administrative staff, Town education officers and PTSA members. As of study areas, 3 old Town administration and 6 schools were selected randomly. Respondents were selected by purposive sampling technique due to their direct relation with the issue under study and also to gain sufficient information. Availability and simple random sampling techniques were also employed. The data was collected through questionnaire, interviews and personal observation. Data gathered through questionnaire were quantitatively analyzed using SPSS percentage, mean value whereas the data gathered through interview open ended questions and observation were qualitatively analyzed. Having gone through these all the study found out that participation of stake holders in material management function process were not run properly. Integrated material management functions were not properly implemented. Lack of training and continuous supervision in the area of educational material management was challenging. Based on these findings, it is found legitimate to forward some recommendation. Therefore capacitating professionals' through training assist users in putting these materials in to effective usage. To develop positive attitude towards the management and utilization of educational materials, school managements should work closely with the school community and stakeholders. Organized and integrated education materials management system should be designed by concerned bodies to utilize and manage materials properly.*

# **CONFLICT MANAGEMENT STRATEGIES IN SECONDARY SCHOOLS OF WOLAITA ZONE, SNNPR**

**BY: AMAN GENSA**

**ADVISOR: ASHEBIR BEZABIH (PH.D)**

## **ABSTRACT**

*The purpose of this study was to investigate conflict management strategies used in school systems to manage conflicts in secondary schools of Wolaita Zone. Explanatory research design of mixed research method was employed to describe the phenomena to the study. (6)six Woreda and (9)nine secondary schools were selected through simple random sampling.Nine unit leaders under sample secondary schools, 6 secondary school supervisor and 27 principals were selected through availability sampling technique. Furthermore, 210 teachers participated in the study by using simple random sampling technique. Questionnaire was prepared for teachers and school leaders. Interview and document analysis were also used to validate the data gathered through questionnaires.Frequency, percentage, standard deviation, means and independent sample t-test were utilized to analyze quantitative dat gathered through the questionnaires. The result of the study indicated that there exist , unfavourable work environment, communication problems, unfairness due to ideological and ethnic differences on the part of principals. Decisions are made without the participation of teachers, unclear policies and guidelines, unfair chance for training, and mismatch between individuals and organizational goals or roles, absence of clear rules and regulations for the school, lack of professional commitment or interest in the work were the major cases for conflict between teachers and school leaders . Besides, compromising was the first frequently used conflict management strategy in the schools under study. The second most prevalent strategies was avoiding followed by accommodating, collaborating and dominating consecutively. Despite these loopholes, school leaders encountered with frequent disputes and handled it according to their personal feelings and skills. It was concluded that majority of secondary school principals working co-operatively with school teachers, students and PSTA members in handling and managing conflict is low Experience is one source of knowledge. Thus, it could be obvious that knowing the sources of conflict before happening is better to handle the issues of conflict before it reaches at the apex. Therefore,it is recommended that seminars, discussions, regular and up dated trainings should be organized for members of school community on communication aspects, diversity management and conflict resolution strategies by Woreda Education Office, Zonal educational department and otherconcerned body.*

**PRACTICE AND CHALLENGES OF GENDER BASED AFFIRMATIVE  
ACTION IN GENERAL SECONDARY SCHOOLS OF WOLAITA  
ZONE,SNNPR**

**BY: FIKRE DICHA MADEBO**

**MAJOR ADVISOR: TAFANO OUKE (AST.PROF )**

**ABSTRACT**

*The purpose of this study was to assess the practice and challenges of gender based affirmative action programs in six government secondary schools in Wolaita zone of SNNPR state. In addition to that, it examined the status of affirmative action practice to support female students and identifies the major challenges that hinder gender based affirmative action program implementation and also the strategies to make affirmative action implementation more effective. The concurrent mixed methods research design and mixed methods research approach: quantitative and qualitative methods were employed for this study. To select participants: for teachers & students, simple random sampling; for principals, gender officers and supervisors, purposive sampling techniques were used. Woredas and schools were selected using simple random and purposive sampling techniques respectively. Data gathering instruments were questionnaires, interview, and document analysis; (questionnaire for teachers and female students; interview for principals, supervisors and gender officers/experts and also document analysis for checking different documents and files.) The data obtained through questionnaires was analyzed using statistical tools and the data obtained through interview, document analysis and open ended items of questionnaire were analyzed qualitatively and narrated. Then, the study revealed that parents of female students were not sufficiently awarded about affirmative action programs; principals are not communicating during planning to include gender issues in their annual and strategic plans; financial and material supports for poor female students was weak; tutorial program, guidance and counseling services were less effective. Rewarding better achieved female students was very low. Provision of pure water, study room and sanitary room was very low. Availability of reference books and other teaching –learning materials were very low. The number of female teachers and leaders was very few. The major challenges of gender based affirmative action practice in this research were the insufficiency of female teachers and leaders in schools to be role models for female students .Lack of awareness, commitment, communication on gender issues and females' education for stakeholders, Lack of self confidence and sense of ownership in female students, Lack of budget, social, cultural, and economic problems around female students. These all challenges were obstacles female students' academic success. The overall recommendation of the study was: to improve the practice of gender based affirmative action programs in general secondary schools, awareness creation to parents and female students should be conducted through providing training. Principals should communicate with stakeholders and include gender issues in their annual and strategic plans. They should also mobilize the community to get sufficient budget for supporting female students. The woreda education office should facilitate sources of budget and provide training for females as well as stakeholders. Zone education department should strengthen monitoring and evaluation programs. Regional education bureau should prepare and distribute manuals and brochures.*

**Key words:** Gender, Female students, Affirmative action in general secondary schools

# **THE PRACTICE AND CHALLENGES OF CONTINEOUS PROFESSIONAL DEVELOPMENT IN GOVERNMENT GENERAL SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: TESHOME TANGA**

**ADVIOR: DEMISSIE D. (PHD)**

## **ABSTRACT**

*The main purpose of this study was assessing the practices and challenges of continuous professional development implementation in secondary schools of Wolaita Zone in the South Nation, Nationalities and People Regional State. The study oversees five basic research questions. In order to response for these questions, descriptive survey research design was employed. Both quantitative and qualitative research approaches were employed. Out of 521 study populations, the totals of 282 participants were selected for the study. The sampling techniques employed in this study were purposive and simple random sampling. The participants sample size were 229 teachers, 10 principals, 20 schools' continuous professional development coordinators, 10 vice principals, 6 Woreda's education office CPD coordinators, and 1 zone education department CPD coordinators. The data gathering tools were questionnaire, interview, focus group discussion and document analysis. The information gathered through closed-ended questionnaire was analyzed using percentage and mean while the information gathered through interview and open-ended questions were narrated qualitatively. The results of document analysis were analyzed and presented descriptively. The findings of the study indicated that the extent of teachers practices of professional development implementation such as mentoring, portfolio development, conducting action researches, facilitating group discussions and peer observations, and evaluating the overall successes and failures of the implementation processes were inappropriately implemented. The school principals, vice principals, cluster supervisors, school continuous professional development coordinators, Woreda's education office CPD coordinators and zone education department CPD coordinators were providing inadequate support for the teachers. The major challenges identified were, lack of trained facilitators, shortage of supports provided for teachers growth, insufficient of training manuals, ambiguity of the available training manuals, inadequate allocation of budget, and school systems were not in the way that can keep happy the training needs of teachers. To overcome the challenges encountered, recommendations were forwarded. These include: employing trained facilitators, practice organizational partnership model of CPD, orienting teachers in progress with general contents of the professional growth, motivating teachers to keenly take more responsibilities in the implementation process, and supervisors, and allocation of adequate resources to efficiently achieve the planned goals.*

# **PRACTICES AND CHALLENGES OF MANAGEMENT OF CO-CURRICULAR PROGRAMS IN SECONDARY SCHOOLS OF GIMBO WOREDA IN KAFFA ZONE**

**BY: TAMIRU DAGNE AHMED**

**ADVISOR: DR. ANTENEH WASYIHUN**

## **ABSTRACT**

*The purpose of this study was to assess the Practices and challenges of management of co-curricular activities in secondary schools of Gimbo Woreda of Kaffa Zone. Descriptive survey design along with mixed method was employed to conduct the study. Questionnaires of closed-ended questions were designed and distributed to collect data from 50 co-curricular leaders and 60 students were selected by using purposive sampling and simple random sampling techniques respectively. Semi-structured interviews were also conducted with 5 co-curricular committee leaders. Document analysis was also a part of this study. To analyze the data, frequency, percentage, mean score, standard deviation and t-test were used. Finding of the study revealed that the number of clubs established and effectively providing services for school community was less and could not give chance for a large population of students to participate. Lack of co-curricular guidelines, absence of experience sharing program and shortage of provision of materials were seen in secondary schools. Adequate guidance and support giving practices for better achievement of teachers and students were not achieved by co-curricular leaders. In addition, lack of training on co-curricular activities and lack of budget were the factors exhibited in secondary schools. So, the participation of students and the implementation of co-curricular activities in secondary schools were low. The implication is that the contribution of CCAs for the students' academic achievement will be minimal. Thus, to improve the situation, it was recommended that training program should be organized by the school leaders and woreda education office. Strong monitoring and feedback mechanism should be established, adequate budget needs to be allocated by government for school, experience sharing program within and between secondary schools in woreda, zone and region should be designed and implemented by joint effort of school, woreda education office, zone and regional education bureau. Stakeholder such as school leaders, teachers, students and supervisors should be participated actively for effectiveness of co-curricular activities.*

# **THE PRACTICES AND CHALLENGES OF TEACHER'S PERFORMANCE APPRAISAL IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: AMANUEL CHURKO MADALCHO**

**ADVISOR: ENDALE BERHANU (ASST.PROFESSOR)**

## **ABSTRACT**

*The purpose the study was recognizing and encouraging good performance, identifying areas for development, and improving overall performance of teachers, and identifying the challenges which affect the teacher's performance appraisal in secondary schools of Wolayta Zone. To this end, the researcher initiated to conduct this study. He used descriptive survey design as well as he used both quantitative and qualitative design for analyzing data. Then, he obtained pertinent facts from 64 teachers as appraisee and (16 school principals and 30 department heads) of the selected schools as an appraisers. The data collected through questionnaire, interview and school documents. The data gathered were analyzed and interpreted using percentage, frequency configuration, mean, standard deviation and t-test quantitatively and in narration qualitatively. The key findings of the study were absence of training for appraisers, lack of confidential and transparent communication between parties involved, delay of giving feedback, lack of validity, reliability, responsiveness, flexibility, and equitability, low understanding on the purpose of performance appraisal, shortage of providing regular feedback, workload of appraisers, rating errors and raters subscribe to their own sets of likes, dislikes, and e expectations about teachers, lack of "fair" and "consistent" performance appraisal system, low appraiser-appraisee relations, and teachers' perception about the performance appraisal in their organizations. Based on the above findings, it was concluded that lack of training, low appraiser-appraisee relationship, lack of transparency, delay of providing feedback, lack of fairness and consistency were challenges of implementing performance appraisal. Based on the conclusions above, it was recommended that the school/the Woreda Education Office should give adequate training for the appraisers, the appraises and the appraisee (teachers) should make objective and factual discussions, they should create confidential and transparent communication between each other, the appraisers should provide immediate feedback, the school should use the performance appraisal for skill improvement, he/she also should use standardized/relevant/fair criteria for performance appraisal, finally, the teachers as well as the school should keep the teachers' portfolio.*

*Key words: Performance appraisal, school documents, 360<sup>0</sup> degree feedback, secondary school*

# **PRACTICES AND CHALLENGES OF IMPLEMENTATION OF SCHOOL IMPROVEMENT PROGRAM /SIP/ IN PREPARATORY SCHOOLS OF JIMMA ZONE**

**BY: TASFAYE DUGUMA AYANA**

**ADVISOR: DIMODIDANA/ASST.PRO./**

## **ABSTRACT**

*The school improvement program is a means for making a school effective and increase students achievement. However its implementation is facing many challenges. Thus, this study therefore intended to assess the practices and challenges of school improvement program implementation in preparatory school in Jimma Zone, Ethiopia. Descriptive survey methodology was employed. To achieve these objective, primary and secondary data were collected. Accordingly, questionnaire, interview and document analysis were used to collect quantitative and qualitative data. Hence a total of respondents 88 were selected, randomly, 6 purposively and 18 were selected by quota sampling technique. The obtained data results were analyzed by using descriptive statistics. Furthermore pilot test was conducted. Then questionnaire administered to teachers and supervisor while school committee, Woreda education office experts interviewed. In addition, to this, document analyses were conducted in 6 preparatory schools. The finding of this study indicated that the implementation of school improvement have been low. From this, the achievements made so far are not encouraging and no significant efforts have been made to strengthen the implementation of school improvement program. Thus, concerned bodies have to: -prepare adequate awareness creation program to ensure practical involvement of all. Stakeholders, organize and allocate the necessary resources, provide proper technical support and practical training to support the implementation of school improvement program (SIP) are required.*

Key words: school improvement program, challenges, practice, implementation

# **PRACTICE AND CHALLENGES OF FINANCIAL RESOURCE MANAGEMENT: THE CASE OF KONSO ZONE SECONDARY SCHOOLS, SNNPR**

**BY: AZAZUE ALEMU TESSEMA**

**ADVISOR: TAFANO OUKE (ASS.PROF.)**

## **ABSTRACT**

*Education is the process bringing out the potentialities of an individual and developing the natural abilities and interests of the citizens. Efficient and effective practices and financial resource management is base to improve quality education. However, inefficient practice, utilization, implementation and management of financial resources tend to be the major challenges of the education system in Ethiopia. The main objective of this study was to investigate the practices and challenges of financial resource management in Konso Zone secondary schools of SNNPR. For this purpose mixed method was employed for data analysis. The design employed was descriptive survey design which was carried out through questionnaire, FGD and data from key informant. The data were collected from both primary and secondary sources; the main instrument used was questionnaires; interview questionnaire, focus group discussion and document review. A total of 107 respondents from four schools, five key informant interviews and four focus group discussions with 40 participants were conducted. The study found that the source of school budget was from government, School internal income, community contribution and NGOs' like World Bank. The study also found that the budget plan preparation lack the participation of stakeholders, over/under utilization, implementation and evolution process problems, lack of financially skilled human power, lack of relevant training, absence of internal and external auditing activity, delay in releasing budget, interferences of unplanned activities, were the major challenges of financial resource management and practices in Konso zone secondary schools. In general, the schools lack active participation of stakeholders and inadequate human power in financial resource management. Hence, it was recommended that the Konso zone/woredas school administrative and schools should take measures to improve the participation of stakeholders, employ and train financially skilled human power, budget of school should be released on time, schools should report budget performance to the concerned bodies, and regular auditing should be carried out by the zone/ woreda education and finance office.*

**IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF THE  
DEGREE OF MASTERS OF ARTS IN EDUCATIONAL PLANNING  
AND MANAGEMENT**

**BY: MULUKEN MESKELE MENA**

**ADVISOR: TAFANO OUKE (ASSISTANT PROFESSOR)**

**ABSTRACT**

*The objectives of the study were to identify the factors contributing to students' behavioral problems. The study employed descriptive survey method and the study was carried out 261 students, 60 teachers (including 12 principals) and 18 Parent-Teacher Association (PTA) members from six secondary schools (Belie, Hanze, Bodit, Gununo, Wadu, and Gasuba) in Wolayta Zone using questionnaire, interview and document analysis. The data collected were analyzed by Statistical Packages for Social Science (SPSS) in forms of frequency, percentage, and one sample t-test and chi-square test. The key findings and conclusion of the study were; (1) Low education and economic background of parents, lack of appropriate parental discipline, guidance and control were as family related factor, (2) The increment of video houses, film shops, night clubs, chewing shops and pool houses were found as community related factors, (3) Shortage of school facilities - insufficient classrooms, lack of library and laboratory service, inadequate recreational places; lack of trained administrator, counsellor and good role model teachers were found as school related factors, (4) Peer pressure, health problems and aggressive behaviours were found as students' personal problems, (5) Failure to do homework, tardiness/late coming, absenteeism, cheating during examination, lack of willingness to wear school uniform, poor classroom participation, doing bad habits were found as the serious problems of schools, and (6) Male and urban students respectively often committed behavioural problems than female and rural counterparts. Depending on the above conclusion and findings above it was recommended that the family should take care for their children; the school should fulfil the school facilities, should provide adequate guidance and counselling service; the Woreda administration should reduce the number of "Khat" shops, night club houses, video houses and pool houses from the surrounding of the schools.*

# **FACTORS AFFECTING FINANCIAL RESOURCE UTILIZATION IN GOVERNMENT SECONDARY SCHOOL OF WOLAITA ZONE**

**BY: ABRAHAM GATORO**

**ADVISOR: DEREJE DEMISSIE (PH.D.)**

## **ABSTRACT**

*Efficient and effective financial resource utilization in schools is the base to improve equality of education. However, inefficient utilization or implementation of financial resources tends to be the major challenges of the education system in Ethiopia. The study's main objective was to investigate factors that affect school financial resource utilization in selected secondary schools in Wolaita zone. The study employed the use of descriptive survey research design. The researcher targeted on five woreda and 2 city administration in ten secondary schools in Wolaita Zone. The sampled population were 142 teachers, 60 PSTA and KETB form ten schools selected by simple random sampling for questionnaire 50 teacher association members selected by comprehensive method 10 principals and 7 education office heads were selected by comprehensive method and 10 financial workers were selected purposively for interview of study area. Reliability was ensured by using testing methods and validity was tested through pilot study. The data were analyzed using SPSS(version 20) software. The major findings based on each basic questions showed that there is low participation of stakeholders in budget preparation, planning and implementation, lack of transparency and accountability in financial utilization, lack of financial performance in applying financial rule and regulation, there is skill gap in stakeholders, lack of capacity building trends ineffective internal and external auditing and delay in releasing budget taking as a major factors affecting financial utilization in the study areas. In conclusion the schools lacked active participation of stakeholders in budget planning, preparation and implementation, lack of skilled man power, inefficient and ineffective practicing financial rules and regulations, low budget monitoring and evaluation mechanisms, lack of regular reporting system of financial performance for responsible bodies of the school and there is budget overutilization trends in schools. Hence, it was recommended that the woreda education offices with school committee take reliable measures to improve the participation of stakeholders, give capacity building training to fill skill gap to the stakeholders. School principals should participate stakeholders in budget planning, preparation and implementation , the woreda education office should release block grant and school grant budget on time, budget performance should be report to the council of kebele per month, auditing should take accordance with financial rule and regulation.*

**KEY WORDS:** financial resource utilization; budget; budgeting ; finance committee(s);

financial control and monitoring. *Education and Training Policy (ETP)*

# **PRACTICES AND CHALLENGES OF IMPLEMENTING CONTINUOUS ASSESSMENT IN PRIMARY SCHOOLS OF WOLAITA ZONE**

**BY: YOHANNES BUNARO**

**ADVISOR: ENDALE BERHANU (ASSIT. PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to investigate practices and challenges of implementing continuous assessment in primary schools of Wolaita Zone. In order to meet the objectives of the study, descriptive and inferential research design and mixed approach were concurrently employed. Five Woredas and One town administration were addressed by this study. The researcher incorporated 215(60%) of the sample populations as respondents. The sampling technique of the study was simple random sampling technique for teachers in order to give equal chance to the target population and availability sampling techniques for school principals. Thirty seven school principals, six supervisors and 178 teachers were primary sources of data. The study focused primary and secondary sources to obtain data. Questionnaires, interviews and document analyses were used for the purpose of collecting relevant data. Validity was checked by pilot test and reliability scale was assured by Cronbach's Alpha which was greater than 0.7. Data obtained through questionnaires were analyzed using statistical tools like percentages, mean scores, standard deviation and independent sample t-test. Moreover, data gathered through open-ended questionnaire item, interview and document analysis were analyzed to complement the questionnaires in narrative form. The finding of this study revealed that: lack of school facilities, the large size of classroom, lack of competences of teachers and school principals, lack of teaching and learning materials, lack of safe and conducive school environment and lack of enough time that hinders the implementation of continuous assessment in schools. Based on the findings, it was concluded that: the implementation of continuous assessment was influenced by diverse factors and impacts on learners' achievement. In line with the above findings and conclusion was recommended that the school leaders, WEO, governmental and non-governmental organizations and other stakeholders should actively involved in various issues and provide possible solutions to solve the problems in a given manner.*

# **RELATIONSHIP BETWEEN SCHOOL CLIMATE AND STUDENTS' PERFORMANCE IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: MULATU TANTU**

**ADVISOR; MARY THUO (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess the relationship between school climate and students' academic performance in government secondary schools of Wolaita Zone. In order to conduct this research a descriptive survey design was employed. The study was guided by the following objectives: to identify the views of teachers and students about the effect of school climate on students' performance. to assess factors of school climate which best predicts students' performance, to identify the main challenges which influence implementation of an effective school climate to improve students' performance and to suggest measures under school climate which could improve students' performance. The study was conducted in Soddo, Bombe, shanto, Badessa Gununo and Bitana secondary schools. The samples consisted of 282 students and 67 teachers and 6 principals. The sampling techniques used in this research were; simple random sampling technique for both teachers and students while principals were included based on availability. To collect data questionnaires, interviews and observation were used. The data was analyzed using frequency, percentage, mean, standard deviation, Pearson correlation coefficient and multiple linear regression. The result of study indicated that school climate factors were highly correlated with students performance, from selected school climate factors safety was highly affects students performance and school climate factors were strong predictors of students' performance. Its conclusion was the school climate components were correlated to students' performance, from mentioned school climate factors like school safety had great affects on students' performance and some mentioned variables were highly predicted students performance. Finally, it was recommended to improve quality of school climate components by prioritizing safety and relate with teachers and students relationships.*

# **THE LINK BETWEEN AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL MATERIALS ON STUDENT ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: THOMAS MOTA**

**ADVISOR: ENDALE BERHANU (ASSISTANT PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to assess the link between availability and utilization of instructional materials on student academic achievement in secondary schools of Wolaita Zone. The sequential exploratory design was employed in this study. The study was based on quantitative and qualitative data generated from both primary and secondary sources. The sample was selected using simple random and availability sampling technique. Questionnaire, interview, observation and document analysis were the instruments used for data collection. For this study 56 teachers and 337 students, were selected using simple random sampling technique. Questionnaire was used to generate mainly quantitative data and interview was employed to generate qualitative data from the selected primary sources. Thus, both quantitative and qualitative methods of data analyses were employed for the study. Descriptive statistics such as frequency, percentage, mean and standard deviation were employed to analyze the quantitative data. From inferential statistics, independent sample t-test was used to see the significance between teachers and students. The finding revealed that there is a great deficiency in the availability and utilization of instructional materials use to different secondary schools. The less availability and the deficiency in the utilization and preparation of instructional materials led to less academic achievement of students and less effectiveness of teaching-learning process. Finding of the study revealed that teachers were less committed in utilizing instructional materials. It was revealed that students taught using instructional materials performed well above those who were not taught using instructional materials. Regarding utilizing instructional materials, teachers did not frequently utilize instructional materials mostly due to lack of interest and inadequacy of training. The results of the interviews held with the school academic vice principal and SPC coordinators and classroom observation indicated that teachers' commitment in using instructional materials in the teaching-learning process was found to be low. It was concluded that availability of instructional materials have influence in teaching-learning process in secondary schools of Wolaita Zone and that instructional materials have impact on students' academic performance in secondary schools. Teachers should develop positive attitude towards the production and utilization of instructional materials for teaching/learning. School teachers should double their efforts in utilizing the materials for the achievement of the aims and objectives of teaching/learning. Furthermore, instructional materials utilization should be improved; in the way that the value can positively influence the students' performance and conduct a farther study in the issue. Finally, the researcher offered recommendations pertaining to the provision and production of instructional materials and the utilization of such instructional materials by teachers of secondary schools.*

*Key words: Availability, Academic Achievement, Utilization, Instructional Materials, Link*

# **PRACTICES AND CHALLENGES OF SCHOOL-BASED SUPERVISION IN GOVERNMENT PREPARATORY SCHOOLS OF HADIYA ZONE**

**BY: DEGU ERGENO UGATO**

**ADVISOR: DAWIT LEGESSE (PHD)**

## **ABSTRACT**

*Purpose of the study was to investigate practice and challenges of school-based supervision in sample preparatory schools of Hadiya Zone. To achieve the purpose, Descriptive survey design along with mixed method was employed. The objective of the study was to identify the practices and challenges of school based supervision in government preparatory schools of Hadiya Zone. 6 cluster supervisors, 72 teachers, 6 school principals' and 6 Woreda Education office coordinator were included in the study using different sampling techniques including random and purposive sampling technique to select samples. A questionnaire, interviews and document analysis were used to gather the necessary data. The data was then tabulated and analyzed qualitatively and quantitatively using percentages and means. The finding of the study showed that, the supervisors do not play the various role expected of them, the teachers role in supervision is almost negligible, the teachers' and school-based supervisors' view do not seem to go in line with the intensions and principles of supervision, the teachers specially appears to have a negative attitude towards supervision, the major problems that affect supervisory practices in the Zone were: supervisors' inefficiency, lack of participatory approach to supervision, shortage of school finance for supervision training, lack of proper training and awareness of supervision for supervisors and teachers. Based on the finding and the summary the following conclusion were made, the supervisors appears inexperienced, uncertified and unspecialized to conduct supervisory practices properly and efficiently, Supervisors do not seem to play the various roles expected of them, the teachers appears to have negative perception towards supervisory practice, Satisfactory pre and post observation conference were not provided enough and supervisors consider themselves as superior in position to school Leaders and teachers them as fault-finder. Based on the finding, some recommendations were teachers, principals, have to be well oriented and trained in supervision, Hadiya Zone Education department should provide relevant and sufficient training about school based supervision, school principals should endeavor to make supervision more systematic and carefully planned, supervision conference should be held between supervisors and teachers consistently and immediately after and before classroom observation, clear concepts on objectives, principles, functions and consequently on the techniques of school based supervision should be stated in the school for each teachers.*

# THE ROLE OF CLUSTER SUPERVISOR'S IN IMPROVING QUALITY EDUCATION IN PUBLIC PRIMARY SCHOOLS OF WOLAITA ZONE, SNNPR

BY: ESHETU ERMIYAS

ADVISOR: ASHEBIR BEZABIH (PHD)

## ABSTRACT

*The main objective of this study was to assess the roles of cluster supervisor's in improving quality education in government primary schools of Wolaita Zone. To achieve this purpose, inferential statistics triangulation research design was employed to assess the roles of cluster supervisors' supervision activities; because, it helps to obtain ample information about the status of supervision and also it helps to know the existing condition of the roles of cluster supervision. Since, the research method of the study was used the mixed approach. The research site included 1 zone, 3 Woredas, 2 Town Administrations 12 cluster centers and 23 public primary schools. The sample respondents of the study were 136 teachers, 23 principals, 12 cluster- supervisors and 5 woredas and town administrations education offices experts totally 176 respondents were participated. Simple random sampling technique was employed to select teachers and cluster supervisor respondents and proportionality sampling to select school principals, and the purposive sampling technique was used to select woredas and town administrations educational office experts. To collect data from the sample group questionnaire, interview and document analysis were used. Data were analyzed both quantitatively and qualitatively by SPSS 16 V. Statistics analysis one-way ANOVA and by narration. The findings indicated that the cluster supervisors have valuable power to improve equality of education. However, the status of cluster supervisor's in this research area was below the standard. The degree of supervision support in education quality improvement of was inadequate. The level of cluster supervisor's in providing in-service training and involvement of teachers in preparation of instructional materials and using alternative teaching methodology was not satisfactory. There should be certain strategies that to make supervisors should prepare holistic check lists. The WEO and ZED must strengthen its role intentionally and taking in account to guide and coordinate between different levels in the school and cluster centers. The WEO is recommended to arrange and deliver different effective training for supervisors. It is also recommended to play great role in developing supervisor's job satisfaction, through intrinsic and extrinsic motivation.*

**Keywords:** - Roles, supervision, improvement, quality education

# **THE PRACTICES AND CHALLENGES OF EDUCATIONAL MATERIAL RESOURCES MANAGEMENT IN GOVERNEMENT PRIMARY SCHOOLS OF WOLAITA ZONE**

**BY: AMANUEL GEZAHEGN**

**ADVISOR: ENDALE BERHANU**

## **ABSTRACT**

*This study sought to investigate the practices and challenges of educational material resources management in primary schools of wolaita zone. To this end, the research design was descriptive survey and concurrent method employed. The study was conducted in 5 woreda, 2 town administration in 17 primary schools. From 17 primary Schools, 191 teachers, were selected by simple random sampling technique while 17 principals, 13 vice principals, 7 supervisors, and 7 woreda curriculum experts were selected by purposive sampling technique. The instruments used to collect data were questionnaire, interview and observation. The data collected through the questionnaire were self-administered and analyzed using percentage; mean and grand mean where as the participants of interview were main principals, supervisors and woreda curriculum officers. Questionnaire was administered to teachers, principals and administrative vice principals. The status of preparing annual purchasing plan of school material based on need assessment, the status of school community participation, inventory system in material for the school, student's proper usage of library materials to improve their learning process, production of materials on the pedagogical center to enhance teaching learning process, the student's involvement on the innovation technology in the school pedagogical center and laboratory and educational materials maintenance like building, broken chairs, tables, desks, damaged doors, window, ceiling, roofs and laboratory equipment was unsatisfactory in the study area. Lack of training for the staff and other stakeholders in educational material management in the schools were very serious problem in the study area. Finally, collecting need assessment before purchasing school materials insure the necessary material purchase and reduce the wastage, so the schools would practice the need assessment in the school before purchasing material properties, the schools and WEO should facilitate training opportunity for the staff members in material management were recommended to practice the current material management in the school and all school leaders should develop the culture of school community participation in school material purchasing plan since it increases the trust in school management and accelerate school activities to its goal.*

**Key Words:** Educational Materials Production and Distribution Agency(EMPDA),Education and training policy (ETP)

# **ASSESSMENT OF COMMUNITY PARTICIPATION IN EDUCATION AT GOVERNMENT PREPARATORY SCHOOLS OF WOLAITA ZONE, SNNPR**

**BY: ASFAW ALEMAYEHU**

**ADVISOR; DIMO DIDANA (ASST.PROFESSOR)**

## **ABSTRACT**

*The purpose of this study was to investigate the community participation in education by coming schools' initiatives and commitment, the level of community participation in school management. In addition, the study aimed at identifying factors that influence community participation to conduct this study, both qualitative and quantitative methods were used and descriptive survey research design was employed. The Study schools were selected by purposive sampling. Respondents were selected by using simple random sampling, availability and purposive sampling techniques. Accordingly, 100(21.9%) Secondary school teachers, 14(100%) principals, 7(100%) supervisors and 40(22.8%) PTA members of the respective secondary schools were selected as samples. Questionnaire, interviews and document analysis were the data collection tools employed in this study. Having pilot tested the instruments; data were collected from teachers, principals and PTA members through questionnaires. Data from supervisors were collected by interview. Data were analyzed and interpreted using both qualitative and quantitative techniques. Individual group means and percentage were employed as Stastical tools to analyze data. The findings of this study showed that the extent of community participation in school activities were not adequate. This inadequate community participation was because of community and school related challenges. Community related challenge were lack of commitment, lack of collaboration, lack of willing to school activities, lack of responsibilities and awareness gap. Lack of willingness and interest to participate in different school meetings to discuss efficiency and effectiveness of the school; absence of accountability and responsibility to be involved in school activities School related challenge were not involving community in planning activities; in school academic and administrative issues and poor financial management; less efforts made by the school to participate community members in overall school activities. It was suggested that these problems would be minimized by strengthening school community relation; by giving training, enhance community awareness, develop good school community relation and communication and by setting community participation strategies with concerning preparatory school stake holders.*

**INFLUENCE OF SCHOOL LEADERSHIP ON ACADEMIC  
ACHIEVEMENT OF  
STUDENETS IN SECONDARY SCHOOS OF WOLAITA ZONE  
BY: BEKELE LAKEW SHAGA**

**ADVISOR: ASHEBIR BEZABIH (PHD)**

**ABSTRACT**

*The purpose of this study was to assess the Influence of school leadership on academic achievement of students' in the secondary schools of Wolaita Zone. The study employed explanatory research design and quantitative and qualitative research methods. Among 12 woreda in the zone, 5 woredas and 2 administrative towns were selected by using simple random sampling technique and all of the 11 secondary schools in those woredas were included as a sample. Data for the study were collected through questionnaires; interviews and document analyses .Questionnaires were prepared and administered to 97 teacher's and 22 department heads selected by simple random sampling techniques and 11 vice principal selected purposely. Eleven (11) principals and eleven (11) PTSA selected purposely were interviewed, and necessary documents were analyzed. The data collected were analyzed by using percentage, means, and an independent sample t-test used by computing the data on spss version 20. Interviewed responses and document analyses were analyzed qualitatively through narration. The findings of this study revealed that, roles played by school leaders for improving students' academic achievement is insignificant. Furthermore, lack of training, lack of regular support, lack of commitment, unavailability of educational resources and principal's role diversity are among the major factors that hinder school leadership effectiveness. From the findings of the study, it was concluded that school leaders are not effectively playing their leadership roles as instructional leaders due to limitation of capacity and other resource constraints found in the school. Therefore, it was recommended that zone education department and woreda offices should build the leadership capacities of the school leaders by providing necessary leadership training and professional support to secondary school leaders.*

# **ROLE OF TEACHERS' IN PROMOTING STUDENTS' ACADEMIC PERFORMANCE IN GOVERNMENT SECONDARY SCHOOLS' OF HADIYA ZONE, SNNPR**

**BY: TEMESGEN KEDIR LAMBE**

**ADVISOR: MARY THUO (PH.D)**

## **ABSTRACT**

*The purpose of this study was to investigate the role of teachers' in promoting students' academic performance in government secondary schools of Hadiya Zone. In this study, descriptive survey design was used where both quantitative and qualitative methods were used to collect and analyze data. Six schools were selected for this study in Hadiya Zone including Heto, Wasgebeta, Shone, Shelela, Bendelicho and Lisana were selected by using simple random sampling techniques. A total sample of 206 included in this study including; teachers', students' and principals'. The sampling techniques employed were simple random sampling for teachers' (140), students' (60) and principals' (6). Data were collected through questionnaires, and interviews analyzed using descriptive statistical tools such as; frequency, percentages, aggregated mean while inferential statistics (t-test) was employed to analyze the data obtained. The data gathered through open-ended questions, and interviews were analyzed qualitatively through narration for the purpose of triangulation. Based on the analysis of data and findings the results were: teachers put extra effort to ensure coverage of syllabus was low, in these schools there were no teaching method effectiveness, teachers were not use non verbal communication to improve learning, language of instruction was due to their previous low level of knowledge, based on experience variations and incentive variation low job satisfaction among teachers, and in terms of students' related issues discipline, poor grade, etc and students reading problems, absenteeism, language problems, unclear what to do, to ask and lack of skill to correct mistakes etc were faced challenges. As concluded, it was found that achievement of students through teachers' promoting level with different extent among the elements of coverage of syllabus, teaching methods, grading rate, using instructional materials, classroom management, motivation of teachers', Students' discipline, rate of students' academic performance, and teachers' commitment were insufficient and minimal. In addition, regarding the problem, some school leaders were not educationally qualified in the related field of specialization and most teachers' were not committed to promote students' performance as intended in the classroom because some of them have no knowhow. The study recommends that to promote the academic performance of students', teaching-learning process should be done in collaboration with parent-teacher-students', Woreda and Hadiya Zone education officers, and Southern, Nation, Nationalities and Peoples' Education Bureau collaboratively by giving training for teachers' to enhance students' achievement level. Finally, teachers' should give emphasis to promote students' result and try to get sustainable training to fill the teaching skill gaps and have closely follow up with school leaders' in order to help and capacitate students'.*

# **FACTORS AFFECTING EDUCATIONAL WASTAGE IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: DANIEL DUNKURO HEMACHO**

**ADVISOR: DEMISE DALELO (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess the factors of education wastage in government secondary schools in Wolaita zone. The study endeavors to identify the major trends that may affect positively or negatively, secondary education efficiency of the zone. To achieve these objective descriptive research studies was conducted. The quantitative data was collected from principals, unit leaders, department heads by using available sampling and teachers using simple random sampling, annual abstracts and report through questionnaires were presented, analyzed and interpreted by using standard deviation frequency count, mean, grand mean and percentage. Qualitative data was collected from students and parents by using focused group discussion and interview. Parents were selected using purposive sampling and that of student using simple random sampling. Eight secondary schools were selected randomly which comprised (13%) of the total secondary schools. The zonal trend of dropout rate and repetition rate of secondary schools was showing oscillating with varying increase and decrease over the years but it ended up with an increasing trend, whereas the trend of dropout rate increased in 2008 by 0.98% and that of repetition rate trend increase by 0.85% in 2008 respectively. The average grand mean of 8 sampled secondary schools showed increased trend of dropout rate by 0.56% and that of repetition increased by 1.60%. The research tools were validated by experts' evaluation and ideas for contents of questionnaires. Reliability of the items must be check before they are administered to the target population of the study by using cronbach's alpha method. From the findings, school related factors, environment related factors and students related factors contributed to education wastage in the zone. To conclude, it was established that there has been a steady increase in the rate of wastage in government secondary schools for a period of three years (2008-2010E.C).The study recommended that teachers, parents and students be involved in efforts to address the school based factors leading to wastage in the zone, leaders and intellectuals in the local community be involved in addressing environment factors that contribute to education wastage, and guidance and counseling services be intensified to address the students personal attributes that leads to education wastage.*

**KeyWords:** Dropout, Education, Efficiency, Repetition, Wastage

# **UTILIZATION OF ICT IN LANGUAGE TEACHING –LEARNING PROCESS IN GOVERNMENT PREPARATORY SCHOOLS OF WOLAITA ZONE**

**BY: DESALEGN BEKELE**

**ADVISOR: MARY THUO (PHD)**

## **ABSTRACT**

*The purpose of this study was to assess the utilization of information communication technology in teaching - learning process of English language subject. The study was conducted in government preparatory schools in Wolaita Zone, Southern region. Design where both Quantitative and Qualitative approaches were employed in the study to collect and analyze data concurrently. The study addressed the following objectives; To assess how teachers use ICT in the teaching learning process, to determine the views of teachers and students on usage of ICT in teaching English subject, to assess the effectiveness of ICT in teaching English in government preparatory schools, to identify the major challenges that hinder teacher and students in using ICTs in the teaching learning process, to suggest potential solutions that can reduce challenges of ICTs utilization in preparatory schools. From 23 preparatory schools in the zone, five schools were randomly as the representative sample for this study. From the sampled schools, 263 grade 12 students and 136 teachers were selected by simple random sampling while 10 principals and 5 unit leaders were included based on purposive. Data collection tools included; Questionnaire, interview, and personal observation in order to get pertinent data. Descriptive statistics methods were used to analyze the data including; frequency counts, percentages, weighted aggregated means and standard deviation. The data collected through questionnaire were entered and analyzed by using SPSS software version 20 while qualitative data was analyzed through narrative. In general the following results were obtained. The finding of the study indicate that the use of ICT for learning speaking skill, writing and listening skill in English language was effective but highly effective for students English language reading skill. Concerning students and teachers view of online tools usage frequency in learning language, the study findings revealed that the use of online ICT tools usage was less effective in the teaching and learning of English language. The study indicates that ICT usage in English language was effective to students English language improvement. According to the findings of the study cell phone /smart phone is the most used electronic devices in teaching English language while Personal Digital Assistant (PDA) was the least used electronic devices. Regarding the challenges the teachers and students face in the utilization of ICT in English language teaching and learning, the study indicate that electronic power problem, inadequate number of computer, the absence of internet and ICT accessories, as well as ICT technician and weak internet connection. As the findings showed, unavailability of some ICT infrastructures, inconsistent technology usage and fluctuating of electricity made ICT more unproductive in improving the quality of education. Moreover, the result of the study pointed out that there are numerous factors that hinder the utilization of ICT at the Wolaita Zone Preparatory Schools. These include infrastructure problem, lack of knowledge and skills of computer and internet usage, lack of administrative and technical support. Based on the findings it is strongly recommended that closed supervision, support and evaluation should be made by stakeholders; government should provide adequate infrastructures like computer, plasma display, internet line etc; training should be given to develop basic skills of using ICTs for teachers and should be motivated to use ICT in their learning. Finally, implications for further research on utilization of ICT, constraints and factors that affect the integration of ICT in teaching and learning process were forwarded. The results obtained from principals and unit leaders interviews, it was concluded that teachers use ICT to prepare presentation, to show diagrams, to bring real life situation in to the classroom and to make learning more practical and attractive as well as to post assignments/exercise for students. Interview used principals and unit leaders results indicated that teachers use internet in the lab activities but the teacher's competence in using ICT is poor. From the interview conducted with unit leaders and principals, it was found that teachers use tape records, videos, radios, computer, internet, video caste records, video-discs and power point.*

*Keywords: Information Communication Technology (ICT), ICT utilization, ICT infrastructures, plasma TV, internet, computer.*

# **PROBLEMS OF STUDENTS DROPOUT IN PRIMARY SCHOOLS OF WOLAITAZONE**

**BY: ENDRIAS AYELE**

**ADVISOR: DR ABRAHAM ASARO**

## **ABSTRACT**

*The purpose of this study was to investigate problems of student dropout, to identify major causes of the problem, and to identify measures need to be taken to retain students' dropout in primary schools of Wolaita zone, SNNPR. Three basic questions were formulated to conduct this study and prallel mixed design was employed. Among 12 rural woreda of Wolaita zone, three woreda selected and from each woreda, three governmental rural primary schools were selected by using simple random sampling techniques namely: From Ofa woreda ,Yakima primary school,Woshe aldada primary school and Waraza birahan primary school, from Humbo tebela woreda:Yelagnaw humbo primary school , Koyisha wangala primary school and Koyisha ogedama primary school, and from Kindo didaye woreda:Lashomogisa primary school ,Shoya primary school and Lasho kera primary school. From these sampled schools, 486 students selected by simple random sampling and 36 class room teachers selected by stratified sampling, 9 principals and 3 cluster supervisors selected by purposive sampling techniques and 21 parent teacher – association members were selected by using simple random sampling techniques .Questionnaire was used as main tool of data collection. Interview and document analysis were used to substantiate the data gathered through questionnaire. Frequency, percentage and mean were utilized to analyses quantitative data gained through the questionnaires. The qualitative data gathered through interview and document analysis were by narration. The analysis to identify the causes of the problem showed that the high rate of students' dropout in this study area is the result of in school and out school related factors. Among the in school related factors, regular absenteeism, frequent repetition, and lack of encouragement from teachers, school distance were among the major causes. Regarding out school factors, parents need child labor/income generating activities, drought/famine, and disunity of parents by divorce or death, early marriage, peer group influence were among the major identified factors. From this therefore, it is concluded that the dropout problems in the study area are result of economic, social and cultural problems and some school problems. Finally, to minimize the problems of students dropout in primary schools of wolaita zone, it was recommended that providing school feeding program, creating awareness on the value of education, providing counseling service for pupils, building schools in nearby community, collaborative working among the school stake holders, recognizing and motivating the best achievers and continuous follow up support in the schools of the study area are forwarded as recommendations.*

**Key Words:** dropout, factors, primary schools

# **PRACTICES AND CHALLENGES OF IMPLEMENTING SCHOOL-BASED INSTRUCTIONAL SUPERVISION IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: GELETU GEZUME**  
**ADVISOR: ASHEBIR BEZABIH (PHD)**

## **ABSTRACT**

*The purpose of the study was to assess practices and challenges of implementing instructional supervision in this secondary schools of Wolaita Zone. To conduct the study, Triangulation research design were employed and different sampling technique were employed to select the sample schools, supervisors, principals, woreda education office quality assurance officers and teachers. From mixed type, concurrent type was employed in this study. To this end, nine secondary schools, 36 leaders(9 school principals, 18 vice principals and 9 unit leaders), 8 supervisors, 6 woreda education office quality assurance officers and 184 teachers were included in this study. Questionnaire was the main data gathering instrument for this study and it was distributed to teachers. Thus, 180 teachers from different levels filled the questionnaires but 4(2.17%) of the questionnaires were not collected from teachers due to the fact that they were not filled the questionnaire properly. Interview was conducted with school principals, supervisors and woreda education office quality assurance officers to enrich the quantitative data. Descriptive statistics like frequency, percentage, mean and standard deviation was the main tools used in the analysis. Besides independent sample t-test was used to compare teachers and school leaders' opinions. The results of the study revealed that the school based instructional supervisory practice was ineffective in the study area. That is, supervisors were inefficient in providing the professional assistance for teachers through organizing workshops, training programs at school level; conducting regular meetings with teachers to identify teaching learning problems and to find solutions to these deficiencies. The status of implementation was school-based instructional supervision was low in sample secondary schools.Hence supervisors are advised to increase their classroom proximity to assist teachers and give possible solutions to the problems teachers are facing.*

# **THE PRACTICES AND CHALLENGES OF SCHOOL BASED SUPERVISION IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: MESFIN TADESSE**  
**ADIVISOR: ASHEBIR BEZABIH (PHD)**

## **ABSTRACT**

*The purpose of this study was to investigate the practices and challenges of school based supervision in government secondary schools of Wolaita Zone in Southern Nation Nationalities and Peoples Region. To conduct the study, triangulation design and a mixed research method was employed. The sample size was 136 teachers, 72 school leaders, 8 cluster supervisors and 6 Woreda education office experts with the total of 222 participants out of 358 study populations. Regarding sampling technique teachers were selected by proportional stratified sampling, school leaders were selected by using availability sampling, cluster supervisors and Woreda education office experts were selected by purposive sampling and Woredas, clusters and schools were selected by simple random sampling technique. The data gathering tools employed were questionnaire, interview and document analysis. The quantitative data was analyzed by using percentage, standard deviation, mean score and independent samples Ttest and the qualitative data was analyzed by narration. The findings indicated that implementation of school based supervision was insufficient. Furthermore, provision of professional support on the areas like; conducting action research, providing in-service trainings and workshops, assisting teachers to study continuous professional development and giving induction trainings was inadequately implemented. The implementation of school based supervision was affected by work overburden, lake of financial incentives, lack of commitment of instructional supervisors, lake of interest by teacher to accept feed backs and lack of educational facilities. Based on this, it was recommended that, school based supervisors should be committed to implement the roles expected from them and Zonal Education Department and Woreda Education Office to facilitate relevant in-service trainings for school based supervisors and teachers on the implementation of school based supervision. In addition, Woreda Education Office and Zonal Education Department (with other stake holders) to fulfill necessary educational facilities and budget for theeffectiveness of school based supervision.*

# **PRACTICES AND CHALLENGES OF INSTRUCTIONAL SUPERVISION IN GOVERNMENT SECONDARY SCHOOLS OF DAWRO ZONE**

**BY: MELAKU MULUGETA BIRATU**

**ADVISOR: DR. DAWIT LEGESSE**

## **ABSTRACT**

*The main purpose of this study was to assess the practices and challenges of instructional supervision in secondary schools of Dawro zone, south nation nationalities and people regional state. To this end, descriptive survey design research was employed. Both quantitative and qualitative methods were employed to collect and analyze data. Seven sampled schools were selected from Issera and Tocha woredas and Tarcha town administration through simple random sampling technique. 138 teachers and 45 department heads were selected through simple random sampling technique. 7 principals, 9 vice-principals, 3 cluster supervisors, 3 woredas supervision coordinators and 1 zone education department supervision coordinator were included based on availability. Data were gathered through questionnaire, interview and document analysis. Questionnaire was used as main tool of data collection. Interview and document analysis were used to substantiate the data gathered through questionnaires. The collected data through close-ended items were analyzed using descriptive statistical tools as mean and standard deviation. The data gathered through open-ended items, interviews and document analysis were analyzed qualitatively through narration for the purpose of triangulation. Finding of the study revealed that instructional supervisors were lagging behind mostly in action research, curriculum development, group development and direct assistance to teachers respectively. Even though the implementation of professional development requires further work, it has better performance. Regarding roles of instructional supervisors, the study indicated that principals did not effectively coordinate school community to evaluate teaching learning and create conducive work environment. Vice-principals also did not provide sufficient professional guidance to teachers and inadequately observe teachers classroom. Moreover, department heads did not organize model teaching for teachers and did not support teachers in selecting and organizing teaching materials. The supervisory choices not implemented based on the needs and interests of teachers. Incapability of instructional supervisors to provide necessary supervisory skills, lack of adequate finance for supervisory activity, overburden of instructional supervisors with administrative tasks, lack of sufficient supervision manuals and guidelines and lack of transparency and smooth relationships between teachers and supervisors were identified as a major challenges to the implementation of instructional supervision in the study area. Based on the findings, supervisors did not effectively implemented tasks of supervision, not accomplished their roles and responsibilities effectively and not properly implemented supervisory choices in secondary schools of Dawro zone. Finally, it was recommended that, woreda education office, zone education department and region education bureau were advised to fill the knowledge and skill gaps of instructional supervisors through in-service training. Also woreda education office and zone education department were recommended to provide necessary resources such as supervision manuals and guidelines and adequate budget as much as possible for the success of supervision to each school.*

# PRACTICES AND CHALLENGES OF IMPLEMENTING GOVERNMENT PRE-PRIMARY SCHOOL EDUCATION IN WOLAITA ZONE

BY: MELESE MELKAMU

ADVISOR: - ABRHAM ASARO (PHD)

## ABSTRACT

*The major purpose of this research was to assess the practices and challenges of pre-primary school education in eleven government pre-primary schools in Wolaia Zone. To achieve this purpose, descriptive survey research design was employed in this study. Both quantitative and qualitative research methods were employed. The specific objectives was to assess the status of organized classroom education in the Wolaita Zone Pre-primary schools educaon, to assess how teachers are trained and supported in the pre-primary school education, to assess the extent to which the stackeholders participated on pre-primary education and to identify the major challenges and problems of pre-primary education in this zone. The sample respondents of the study were 11 school principals, 44 teachers, 38 parents and 38 Woredas and town administrations education officers and 5 Woreda and town administrations education office pre-primary school experts totally 136 sampled populations were participated . Simple random, purposive and proportionality sampling technique was employed. To collect and analyze data the questionnaire was adopted, and modified based on the existing relevant review literatures, knowledge and experience of the researcher. The data was collected in accordance with the nature of basic questions and of the purpose of the study through questionnaires, interview, focus group discussion (FGD) and observation using checklist analyzed using both quantitative and qualitative approaches of data analysis. Quantitative research was generates statistics through the use of large scale survey research using instrument like questionnaires. Major findings were lack of trained teachers, unavailability of basic infrastructure and support materials together with supportive human resources, absence of suitable prepared curriculum accompanied by cultural and social resistant forces from the society might hampered the participation of all children. In order to solve the problems/challenges the government pre-primary schools were facing, and to improve their performance the following recommendations have been forwarded based on the findings of the study. In presence of high demand but low capacity to accommodate all those in need and interested the practice of opening new pre-primary schools, the educational officials in every level should have gave due attention to prepare comprehensive guideline and learning materials and parents and community members should have to participate on the improvement of pre-primary education. All children in surrounding could have got a chance of pre-primary education; particularly those children with disabilities were accessible for pre-primary education, even in those pre-primary school education assumed to be conductive, but non conduciveness nature of pre-primary education as well as socio-cultural factors as well witnessed by respondents.*

**Keywords;** *practices, challenges and pre-primary school education*

# **PRACTICES AND CHALLENGES OF INSTRUCTIONAL LEADERSHIP IN INCREASING STUDENTS' ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: MESELE W/SEN BET**

**ADVISOR: MISGANU LEGESSE (PH,D)**

## **ABSTRACT**

*The purpose of this study was to investigate the practices and challenges of Instructional leadership in increasing students' academic achievements in government secondary schools. To conduct this study, three basic questions were framed they emphasized on to what extent instructional leaders performing the functions of instructional leadership activities in promoting the academic achievement of the students, To what dimension of instructional leadership are principals giving more priority in instructional leadership practices in promoting the academic achievement of the students and what are the major challenges that impede secondary school principals from applying effective instructional leadership in promoting the academic achievement of the students. In order to address the objectives of the study, explanatory sequential mixed methods design was employed. Seven woreda and nine secondary schools were selected through simple random sampling. 7 woreda education office experts under simple woreda, 7 secondary school supervisor, 9 unit leaders and 27 principals were selected through availability sampling technique. Furthermore, 207 teachers and 27 department heads participated in the study by using simple random sampling technique. Questionnaire was prepared for teachers and school leaders. Interview and document analysis were also used to validate the data gathered through questionnaires. Data collected from respondents were analyzed and interpreted using Percentage, independent sample t-test, and weighted mean. The result of the study indicated that principals did not play their role to declare and spread the goals through the whole school stakeholders so that they will support and integrate the goals into their daily practice, the mission statements not stated clearly and widely known and not prioritize students academic achievement. Besides, unavailability of instructional materials, not well distribution and sharing of responsibility and ineffective parents involvement in their children education, lack of in-service and pre service training, principal's heavy work load, lack of strong administrative leadership and lack of descriptive and constructive feedback were major identified problems. Based on the findings of the study, principals should focus on the role in establishing the main purpose of the school in cooperation with the school staff framing school goals and communicating school goal and defining mission and framing school goal and which was not sufficiently communicated given low priority in practice among the dimensions and function of instructional leadership. As well as unavailability of instructional materials, not well distribution and sharing of responsibility lack of strong administrative leadership and lack of descriptive and constructive feedback and in-service and pre service training was given to principals and teachers for updating their instructional leadership practice and its implementation were concluded. Finally, to alleviate the problems of secondary school instructional leadership communicated school vision, vision, mission and goals to improve their students' academic achievement in cooperation with the school staff and the whole school stakeholders and mission statement should be clearly declared, actively assisted and molded by principals, and the goal should be known and acknowledged by teachers and prioritized on academic achievement of the students rather than teachers work recommendations were given. Regular and up dated trainings should be given. Based on the challenges related with instructional leadership practice, Woreda education officers and every stake holder in cooperation with non-governmental organizations facilitate the training programs for the effectiveness instructional leadership at the school level were suggested.*

**PRACTICES AND CHALLENGES OF INTEGRATING  
INFORMATION AND COMMUNICATION TECHNOLOGIES IN  
PEDAGOGICAL CENTERS OF GOVERNMENT SECONDARY  
SCHOOLS IN WOLAITA ZONE**

**BY: NAZRATE GALCHA BETALO**

**MAJOR ADVISOR: MARY THUO (PHD)**

**ABSTRACT**

*The purpose of this study was to investigate practices and challenges of integrating information and communication technologies in pedagogical centers in government secondary schools of Wolaita Zone. This study employed a descriptive survey research design where both Quantitative and qualitative approaches were used to collect and analyze data concurrently. The specific objectives of this study were: to identify how teachers integrate information communication technologies, to identify the attitude of teachers and to assess challenges. The study conducted in five secondary schools in the five selected Woredas and town administrations. 193 teachers included by simple random method five pedagogical center representatives and five principals included based on availability in this study. Questionnaires, interviews and observation were tools of data collection. Findings on usage of information technology tools, most of teachers used some times, majority of them used the tools in their offices and in the computer rooms without involving students. Even though most of the teachers had positive attitude towards information technology, the findings show that teachers had a skill gap on how to use the technology tools. Teachers faced many challenges while integrating information communication technologies in teaching learning process, including; lack of training for pedagogical centers representatives and teachers; lack of school support, shortage of time to integrate the technology in classrooms, poor environment set-up in computer laboratory rooms and etc. This study recommended the number and types of ICT tools should be improved, the infrastructures that support information communication technologies should be improved, different trainings should be organized at the school level for teachers and Pedagogical centers representatives, leadership and instructional support need to be given attention by school administrators, to consume time while integrating information communication technologies in teaching learning process, the computer laboratories and learning classrooms should be filled with necessary equipment and should be neat in every secondary school and keep up the tools from virus attack and providing maintenances on time is recommended.*

# **PRACTICE AND CHALLENGES IN IMPLEMENTING CO-CURRICULAR ACTIVITIES IN SECONDARY SCHOOLS OF WOLIATA ZONE**

**BY: MESELE LOHA**

**ADVISOR: ABRHAM ASARO (PHD)**

## **ABSTRACT**

*This study was designed to investigate the practice and challenges in implementing Co-curricular activities in secondary schools of Wolita Zone. A descriptive survey study design was employed, in which both quantitative and qualitative techniques were applied by randomly selecting 271 students and 20 teachers, and by using the availability sampling of 8 principals, 4 supervisors and 4 Woreda co-curricular activity coordinators were selected from Preparatory Schools of Bele, Shanto, Shola Kodo and Areka. The total respondents used for this study were 307. Three instruments were used to complete this study: Likert's scale questionnaires, Semi-structured interview and Document analysis. Descriptive statistics, such as frequencies and percentages were used to determine the different aspects of demographic data, mean, standard deviation and variance used to analyze the practice and perception of participants in co-curricular activities implementation, and mean rank order-used to identify the differences in challenges to co-curricular activities' implementation were used for data analysis. The results from document analysis and interview were analyzed thematically to be triangulated with the results of data obtained from questionnaire. The results indicated that all participants of the study have experienced poor practice on co-curricular activities. Regarding perception and practice, respondents had enough awareness and understood the significance of participation on co-curricular activities though teacher support and evaluation on its implementation was poor. Therefore, perception of respondents towards the co-curricular activities predicts for the poor practice up on it in the school. With regard to participants' role, students and teachers did not like to participate in the implementation of co-curricular activity as the result of poor performance of different clubs in the study area. Thus, the participation level affects the implementation of co-curricular activities. Even though some teachers had got a little training, it did nothing for the involvement, cultivation and help of students in co-curricular activities. Although administration problems, low awareness of students, low motivation and evaluation and constraints to budget were challenges agreed by respondents, administration problem was ranked as the most serious problem while constraints to budget was the least serious one. Thus, students, teachers and school administrators can do a lot to bring change on the implementation of co-curricular activities in the school. Eventually, the need for further studies on related topics to bring quality in education was indicated.*

# **PRACTICES AND CHALLENGES IN TEACHING MATHEMATICS AS A SUBJECT IN SECONDARY SCHOOLS OF DAWRO ZONE**

**BY: TADELE TAYE**

**ADVISOR: ABRAHAM ASARO (PHD)**

## **ABSTRACT**

*This study was intended to access practices and challenges in teaching mathematics as a subject in secondary schools of Dawro zone. The research design was convergent parallel and the method used was mixed method. The respondents of the study were grade 9&10 students, mathematics department head, principals and mathematics teachers in selected schools. The main purpose of the study was to determine the challenges that affect teaching and learning mathematics. Some instruments like questionnaires, interview and document were employed for data collection. The questionnaires were filled with 362 students and 27 teachers. For interview, 5 mathematics department head and 5 principals were interviewed. Roster of both grades 9 & 10 in addition EGSSLCE of grade 10 was used as a document. Thus, the findings indicate that instructional strategies and methods and individual factors affect teaching and learning mathematics. Among these challenges, teachers' attitude towards mathematics affects students' attitude towards mathematics as well as their achievement was the first most influential factor in teaching and learning mathematics. The second and the third most influential factors, instructional strategies and methods and Class size were also identified by most respondents as a major hindrance for effective teaching and learning. Most of student respondents have a problem of background knowledge and confidence to understand mathematical concepts. The other main finding was mathematics achievement and performance were low compared to the three other science subjects. From the findings, the study concluded that teachers rarely incorporated varied learning activities in Mathematics lessons, their teaching methods and strategies were ineffective and inefficient. Finally, based on the findings of the study, it was recommended that students need to be equipped with necessary background knowledge, arithmetic ability and they should develop confidence in mathematics. So, concerned bodies, teachers and school administration should make the spirit of peer educational cooperation among students so that students may work with strong network to improve their academic achievement in mathematics subject.*

# COMPARATIVE STUDY ON THE PRACTICE AND CHALLENGES OF LEADERSHIP STYLES IN GOVERNMENTAL AND PRIVATE PRIMARY SCHOOLS IN CASE OF BODITI TOWN, WOLAITA ZONE, SNNPR

BY: TAFESSELAMMADIDANA

ADVISOR: DIMODIDANA (ASS. PROFESSOR)

## ABSTRACT

*This research was designed to compare the practice and challenges of leadership styles in Governmental and private primary schools in Boditi town. It was delimited to leadership styles of principals of two private and three governmental primary schools with respect to the practice of autocratic, democratic and laissez-fair leadership styles and the challenges in implementing these styles. Questions raised were: 1/ what are the most common leadership styles practiced by Governmental and private Primary school leaders of Boditi town? 2/ what are the challenges in implementing the three leadership styles in the study area in different situations? 3/ what are the impacts of those challenges in the study area? The researcher used descriptive survey research design. The target population of this study is 268. The researcher used simple random and purposive sampling. The sample size includes 112 teachers to whom questionnaire was administered and 48 Key informants of interview. The researcher used both qualitative and quantitative research methods. The quantitative data collected through questionnaire were analyzed using descriptive statistical tools such as mean, frequency and percentages. The data collected through interview were analyzed qualitatively and expressed through narration. The major findings revealed that autocratic style of leadership is the dominant leadership style practiced in private primary schools whereas democratic and laissez-fair leadership styles are dominantly practiced in public primary schools. The challenges hindering the implementation of the three styles of leadership in the study area are leaders' upbringing or family's behavior, behavior of workers, nature of task or task structure and leader's personal behavior, lack of ability, lack of trust, fear of failure, poor relationship between principals and followers, lack of experience, inability to use task oriented and relationship oriented approaches. These conditions resulted in the decline in the schools' achievement including students' results. Conclusions include autocratic leadership style was the most dominant leadership style practiced by principals of private primary schools of Boditi town. These schools moderately practice democratic and laissez-fair styles of leadership unlike public primary schools. Based on the findings, it is recommended that both governmental and private primary school principals need to practice autocratic, democratic and Laissez-fair styles of leadership based on different situations. Finally, references and appendices follow the research report.*

Keywords: Challenges, Followers, Leaders, Leadership styles, Leadership practice

# **PRACTICES AND CHALLENGES OF LIBRARY USAGE IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY:TEGEGN DATA**

**ADVISOR:CHOMBE ANAGAW. (PHD)**

## **ABSTRACT**

*This study examined lack of evidence based practices and passive usage of library resources which students could use for their studies were problems militating against the use of school libraries. Moreover, scarcity of current reading materials, poor library orientation, and poor library accommodation were challenges facing students in using school libraries in secondary schools in Wolaita Zone. The purpose of this study was to asses' practices and challenges of library usage in selected government secondary schools of woliata zone. To achieve this purpose, three basic questions were formulated. The study employed mixed approach designs especially Quan and Qual was used in the study. The study used 210 students, 40 teachers were selected by using simple random techniques and 4 head principals and 4 library coordinators were participated based on purposive sampling techniques. Hence, a total of 258 sample respondents were included in the given study. The three data collecting methods were used namely: Questionnaires, interviews, and document observation was employed. Statistical package of social science version 20 was used to analyze data by the percentage, mean, standard deviation was employed The effect of this study has shown that the secondary school library materials were in adequate, relatively irrelevant and the student's extent of using practice was moderately low. As finding verified students Low interest of using library materials, teachers insufficient encouragement, physical furniture, inconvenient plan of program and students reading habit, low attention towards reading materials, shortage of reference materials, low follow up school backward handling system influenced the practice of library usage. Lastly, it was concluded that lack of evidence based practice and passive usage of library resources which students could use for their studies were problems observed in the study area which seeks treatment. Finally, it was recommended that the school and the stakeholder should organize the school libraries with accessible materials with the active work and creating enough awareness to school students and other concerned bodies to provide essential facilities before school starts its tasks .*

Key words: school library service, library use, education, status of the school.

# **CHALLENGES OF TEACHING LEARNING THROUGH PLASMA TV IN SELECTED GOVERNMENT PREPARATORY SCHOOLS OF WOLAITA ZONE**

**BY: TEMESGEN LENCHA**

**ADVISOR: CHOMBE ANAGAW (PHD)**

## **ABSTRACT**

*The main purpose of this study was to the challenges of plasma TV utilization in the teaching learning process in some selected preparatory schools in Wolaita zone. To achieve this, a descriptive survey research design was employed and both quantitative and qualitative data were used. Sources of primary data were teachers and students. Single random sampling technique was employed to select 137 teachers and 448 students from five preparatory schools. Questionnaire prepared for students and teachers, interview with teachers and students as well as classroom observation were used to collect data for this study. The collected data were analyzed and interpreted in percentage and frequencies and also narrated qualitatively. The analysis of the data indicated that teachers attitudes towards plasma TV, lack of skilled man power, poor interruption and lack of power back up plasma teacher speech speed, accent and pronunciation, teachers poor time management were the challenges of teachers and students encounter in the utilization of plasma TV in teaching learning process. Hence, teachers training, recruiting man power, teachers support students with supplementary activities n based on plasma instruction and teachers upgrading their English language proficiency were recommended to improve the utilization of plasma TV in the teaching learning process.*

**Key words: plasma TV, Instructional TV**

**PRACTICES AND FACTORS THAT INFLUENCE IMPLEMENTATION  
OF ACTIVE LEARNING APPROACH IN TEACHING SOCIAL SCIENCE  
SUBJECTS IN GOVERNMENT SECONDARY SCHOOLS OF WOLAITA  
ZONE, ETHIOPIA**

**BY: WONDIMAGEGN WAYISSO SABRO**

**ADVISOR: MARY THUO (PHD)**

**ABSTRACT**

*This study was to investigate the practices and factors that influence implementation of active learning, to assess how the perceptions of teachers and students influence their practices of active learning and to identify factors affecting implementation of active learning approach in teaching social science subjects in government secondary schools of Wolaita zone. To achieve the purpose, descriptive survey research design was employed. A sample of eighty seven students, fifty social science teachers, six principals and twenty four school based supervisors from the six sample schools were included in the study. Random sampling technique was used for selected sample schools, Systematic sampling technique was used for selected students, and availability sampling method was used for selected teachers, principals and school based supervisors. Then the quantitative data was analyzed using, percentage, frequency, mean value and standard deviation and the qualitative data was interpreted with narrative statements. The finding of this study indicates that active learning is appropriate for teaching. However, teachers are not regularly using active learning methods. Group discussion, question and answer and group work are found to be used as active learning strategies in the classroom. When students are given activities to practice, their participation is low. Students were not happy to practice active learning in a sense that it consumes much of time. Even though, teachers perception of active learning is good, but, the roles expected from them and the students are not effectively practiced due to; time constraints, un-conducive classroom, problem of communication in English language, fear of making mistakes, lack of interest of students and large number of students in the class. Hence, the study concluded that to solve the major problems principals, school based supervisors and teachers should create conducive environment by providing relevant materials, motivating and encouraging students, and arranging training for teachers. The social science teachers should shift their teaching methodologies from the traditional lecture method to the more participatory and effective learning methods by acting as facilitator, and encouraging students' participation through the use of different active learning methods.*

# **PRACTICES AND CHALLENGES OF INSTRUCTIONAL SUPERVISION IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: YIGEZU LENCHA**

**ADVISOR: ASHEBIR BEZABIH (PH.D)**

## **ABSTRACT**

*The purpose of this study was to investigate the practices and challenges of instructional supervision in government secondary school of Wolaita zone. To conduct the study, a mixed approach research design with multistage sampling technique was employed. To this end, eight woreda and ten secondary schools and 180 teachers were selected through simple random sampling. 10 school principals and 20 vice principals, 8 secondary school supervisors 8 Woreda Education office experts, were selected by using available sampling techniques. The data gathering tools employed were questionnaire, interview as well as document analysis. The quantitative data was analyzed by using percentage, standard deviation, mean score and independent samples T- test and the qualitative data was analyzed by narration. Questionnaire was the main data gathering instrument for this study. Thus, 30 principals and 180 teachers from different levels filled the questionnaires. Interview was conducted supervisors and Woreda education office expertise to enrich the quantitative data. The results of the study revealed that instructional supervisory practices applied by supervisors to improve teaching learning process were ineffective. Instructional supervisors were also inefficient in promoting professional competence of teachers. Furthermore, the study revealed that: lack of support like manuals, lack of training and experience sharing session, shortage of budget, lack of basic facilities and financial incentives and work overburden hinder proper implementation of instructional supervision. The recommendations forwarded include: awareness on the part of instructional supervisors and teachers through trainings, workshops and discussion forums about the different strategies of supervision with the Woreda education office and Zonal Education department in order to bring professional growth of teachers and improve their instructional practice. In addition to these; instructional supervisors should be committed to provide professional support to teachers in order to improve their instructional limitations*

**PRACTICES, CONTRIBUTIONS AND CHALLENGES OF SCHOOL  
BASED SUPERVISION TOWARDS SCHOOL IMPROVEMENT  
PROGRAM IN SECONDARY SCHOOLS OF WOLAITA ZONE**

**BY: ZINASH BELETE SHOYA**

**ADVISOR: MISGANU LEGESSE (PHD)**

**ABSTRACT**

*The purpose of this study was to examine the practices, contributions and challenges of school-based supervision towards school improvement program in secondary schools of Wolaita Zone. To conduct the study, a descriptive survey research design was employed and mixed research method was used to enrich data. The study was carried out in 9 selected secondary schools of Wolaita Zone using simple random sampling technique. All the 9 secondary school cluster supervisors were also included available for the interview. Questionnaire was the main data gathering instrument for this study. Quantitative data collected through questionnaire was analyzed by using mean scores, frequency, percentage and independent sample t-test using SPSS version 20. Interview and document analysis were also used to substantiate the data gathered through questionnaires. Findings of the study revealed that, the practice of school-based supervision in providing different supervisory options for teachers such as regularly conducting clinical, collegial, self-directed and contextual supervision by recognizing the individual behavioral difference between teachers were not effectively implemented in secondary schools of study area. School-based supervision practice in the study area was not implemented properly to contribute for professional development of teachers. Furthermore, as the findings of the study indicated, factors affecting school-based supervision towards school improvement program were teachers' negative perception and resistance toward supervision, lack of relevant training programs for supervisors and shortage of budget. To minimize the problems of school-based supervision and to promote school improvement through school-based supervision, it is strongly advised that supervisors have to provide different supervisory options and approaches to teachers. It is a fact that giving in-service trainings and facilitating experience sharing session for teachers needed to update their professional development. A school-based supervisor was advised to assist teachers to utilize supportive teaching materials and encourage application of various methodologies for instructional improvement. Moreover, School and Woreda education officials in collaboration with ZEO and REB should give sufficient and sustainable professional and technical assistance for school-based supervision program.*

**THE PRACTICE AND CHALLENGES OF SCHOOL COMMUNITY  
RELATIONSHIP IN GOVERNMENT SECONDARY SCHOOLS OF  
BOLOSO SORE WOREDA, WOLITA ZONE, SNNPPR OF, ETHIOPIA**

**BY: KASECH ELIAS WOEMAGO**

**ADVISOR: DR. DEGAFE DARZA**

**ABSTRACT**

*The purpose of this study was to investigate the practices and challenges of school community relation in government secondary schools in Boloso sore woreda , in Wolita zone. To conduct this study, mixed research method with concurrent triangulation research design was employed. Study schools were selected by availability sampling. Respondents were selected by using simple random sampling and purposive sampling techniques. Accordingly, 5(100%) government secondary schools, 66(40%) Secondary school teachers, 30(55.6%) KETB members, 5(100%) principals and 18(43%) PTA members of the respective secondary schools were selected as samples. Questionnaire, interviews and document analysis were the data collection tools employed in this study. Having pilot tested the instruments; data were collected from teachers and KETB members through questionnaires. Data from principals and PTA members were collected by interview. Data were analyzed and interpreted using both qualitative and quantitative techniques. Frequency, percentage, individual group means and weighted means were employed as statically tools to analyze data. The findings of this study showed that the extent of community participation in school activities were not adequate. This inadequate community participation was because of community and school related challenges. Community related challenge were lack of commitment, lack of collaboration, lack of willing to school activities, lack of responsibilities and awareness gap. School related challenge were not involving community in planning activities; in school academic and administrative issues and poor financial management; less efforts made by the school to participate community members in overall school activities. The study suggested that these problems would be minimized by strengthening school community relation; by giving training, enhance community awareness, develop good school community relation and communication and by setting strategies with concerning stake holders.*

Key words: community, participation, secondary schools, relationship, participants, challenges.

## **5.2. Department of Psychology**

**MA in Counseling Psychology**

# **THE ROLE OF COUNSELLING IN IMPROVING STUDY SKILLS AND ACADEMIC PERFORMANCE OF STUDENTS AMONG BETHLEHEM HIGH SCHOOL**

**BY: WONDIMU KUMA**

**ADVISOR: DR. P.T. SALEENDRAN**

## **ABSTRACT**

*The general objective of the study was examining the role of counseling in improving students study skills and academic performance. The study was conducted at Bethlehem and Hopeful generation high school located at Wolaita Sodo. Quasi-experimental study design was used in this study. Bethlehem high school was considered as the experimental group and Hopeful generation as the control group. 30 students from grade 9 Bethlehem, 30 students from grade 9 Hopeful generation schools was considered as experimental and control group respectively. Primary data was collected from both the experimental and control groups before and after the intervention. Study skill inventory and roster were used to collect data. The reliability of the study skill scales was evaluated before the conduct of the study. The analysis involved descriptive as well as inferential statistics. Calculation of mean and standard deviation were undertaken, t-test for comparison of two samples means were used to test the study hypothesis by examining the statistical significance of the study skill and academic results difference between the two groups. The counseling was provided to students in the experimental group only. The finding of the study showed that the intervention was effective in improving the study skill of students in the experimental group significantly. The students in the experimental groups were found to be better in reading text books, Taking notes, Studying, Memorizing, Preparing for tests and Time management than that of comparison groups. Besides, the test result of the students in the experimental group ( $M=2.20$ ,  $SD=0.657$ ) was higher than that of the comparison group ( $M=2.031$ ,  $SD=0.589$ ),  $t(2.187)$   $p \leq 0.05$  this implies as the intervention had a positive effect on the student's academic performance as well.*

**COUNSELING SERVICE IN FAMILY PLANNING PROGRAM:  
PRACTICE, CHALLENGES AND OPPORTUNITIES  
IN WOLAITA SODO TOWN HEALTH CENTERS**

**BY: MULUGETA ANEBO**

**ADVISOR: MR. MESFIN BALGU**

**ABSTRACT**

*Counseling service in family planning program is the process of giving information, clearing misunderstandings, and helping women to make an informed voluntary choice. Family planning is also a key to the health and survival of infants and children. The improved access of counseling service of family planning program expands the choice of availability on contraceptive methods and updates the knowledge of family planning program for the couples at health centers. The main objectives of the Study are to assess counseling service practice, challenge and opportunities in family planning in Wolaita Sodo town health center. The research design adopted in this study was mixed designs which were both qualitative and quantitative approaches that were aimed at examining the counseling service in family planning program: practice, challenge, and opportunities in Wolaita Sodo town health centers among couples. The researcher by purposive sampling method selected the governmental health centers to clarify and cost minimize. The researcher selected one health center in the case of large number of couples visiting Sodo health center. The data were collected by using questionnaire containing open and close ended questions, interview and focus group discussion. The analysis of data involved descriptive data analysis techniques. The findings of the study indicated that, among the total respondents, more than half had no experience in counseling services for family planning program and the respondents used family planning program without counseling service in health centers. Also, almost all male couple didn't attend and showed less attention during counseling session and has no adequate awareness for couples in counseling service of family planning program. Implementation of counselling service problems, awareness of couples up on counseling service, less attention on male couple in counseling service of family planning program and absence of separated counseling rooms were the identified challenges for counseling service in family planning program in Wolaita Sodo town health center. The concerned bodies have to update the awareness, attitude and knowledge of couple in counseling service of family planning program and employ the trained counselors or Psychiatrists in health centers.*



## **6. School of Informatics**

### **6.1. Department of Information Technology**

#### **MSc in Information Technology**

# **PREDICT CUSTOMER CHURN IN OMO MICRO FINANCE INSTITUTION USING DATA MINING TECHNIQUES IN CASE OF WOLAITA ZONE DISTRICTS**

**By: MENGESHA MUKUNE**

**ADVISOR: DR.MESFINE ABEBE**

## **ABSTRACT**

*The ultimate goal of micro finance instruction (MFI) is to have retain their customers. Hence it to expending economic opportunities of low income class and should be endeavor to extended credit facilities , access improve the status of poor clients and society to economically empower them. To attain this objective organization of such type should decide on the best approaches and strictly follow retention way to take on. But in Omo-micro finance institution(OMFI) the recorded data administrate , the customer retain and best market strategic draft implementation , technology oriented service to provide , and others are using a sluggish mechanism. For this reason every year 39 % of customers churn or threat of to churn. The methodology used for this research was followed CRISP-DM which has six- steep knowledge discovery process. Data was collected from Woliata zone 16 districts of Omo- micro finance institution recorded digital data with more than 200, 000 records accumulated for 10 years. The filtered data was analyzed using WEKA data mining software. Three populated data mining algorithms neural network (NN), J48 Decision tree, and rule induction( PART) were applied to develop the predicative model using 50,050 records which are purposively selected from targeted data sets Further analysis of relationship among related critical and basic customer attributes used to identify more dominant predictive model in contributing the customer to be attrition. The best model PART scored 99.7333 % with an exact positive impact minimizing in districts customer churn can be used in making the right decision to accept or refuse loan request and during the registration of new customers The research tried to study the churn customer behavior and those account statues of dormant , which indicated results as the Urbana area customers more relatively to churn defending on the big amount of Omo micro finance institution massive history data of customers This thesis can go defining for transaction account to distingue the churn customer and a best accuracy if the research moves one step and standard data has been given if the rules generated indicated to user interface for easy access of the model at hand.*

Key Term: customer churn, Omo micro finance institution, data mining predict, account dormancy, transaction and WEKA

# **APPLYING CLUSTERING ALGORITHM TO PREDICT POTENTIAL CUSTOMERS IN VISION FUND MICRO FINANCE IN WOLAITA SODO DISTRICT**

**BY: GETANEH KUTURE**

**ADVISOR: DR. MESFIN ABEBE**

## **ABSTRACT**

*Identifying customers which are more likely potential to a product and service offering is an important issue for Vision Fund Micro Finance institution in wolaita sodo branch. In customers identification data mining has been used extensively to predict potential customers for a product and service. The final goal of this thesis was to build a model that helps to classify customers for Vision Fund microfinance institution in wolaita sodo branch product and service. Since there were no predefined classes, that describe the customers of the institution, the researcher used clustering techniques that resulted in the appropriate number of clusters. Then, a predictive model was developed to predict potential customers. This predictive model achieved an accuracy of 99.95%. For modeling purpose, data were gathered from the institution head office. Since irrelevant features result in bad model performance, data preprocessing was performed in order to determine the inputs to the model. Thus, various data mining techniques and algorithms were used to implement each step of the modeling process and alleviate related difficulties. K-means was used as a clustering algorithm to segment customers" record into clusters with similar characters. Different parameters were used to run the clustering algorithm before reaching at segment that made business sense. J48 decision tree algorithm was used for classification purpose. In addition to those attributes that are believed by the experts to have high impact on customer segmentation, attributes value of loan amount have a big influence. Generally, the result of the study was encouraging, which reinforces the possible application of data mining solution to the microfinance industry, particularly, in customer segmentation and prediction in Wolaita Sodo Vision Fund microfinance institution.*

**Key words:** Data mining, K-means clustering, classification, J48, micro finance

# **RAIN FALL PREDICTION USING DATA MINING TECHNIQUES: IN CASE OF GAMO LOW LANDS**

**BY: ABAYNEH ARBA ORKE**

**MAJOR ADVISOR: MESFIN ABEBE (PH.D.)**

## **ABSTRACT**

*Rain fall prediction is the most challenging problem and very complex process through the world. In the field of meteorology predicting rain fall is a complicated procedure that includes numerous specialized fields of knowledge because all decisions are to be taken with a degree of ambiguity in order to the disorganized nature of the atmosphere that limits the validity of deterministic forecasts. Long term rainfall prediction is very important for countries whose economy depends mainly on agriculture like Ethiopia. Gamo lowlands are one of the major areas in Ethiopia whose economy was depending on agriculture. Therefore, Government and concerned bodies gave special attention to have an accurate model for rainfall prediction for Gamo lowlands. By having this point as the motivating factor for study, this work tried to predict rain fall by using data mining techniques. In recent years, data-mining has become one of the most important tools for extracting and manipulating data and for establishing patterns in order to produce useful information for decision-making. Due to the absence of rain fall prediction model in Gamo lowlands, this research paper introduced three important and frequently used data mining techniques: J48, Naïve Bayes and One-R classifier algorithm using weka 3.9.2 tool to achieve classification response for rain fall prediction. Beside the basic description, the research paper compares these three classifiers over different parameters and helps the meteorology station workers or experts to select better classification algorithm. The researcher used datasets with 3720 instances this was ten years data from 2007-2016 G.C. From the whole 60%, 65%, 70% and 75% instances were evaluated as a sample by 10 fold cross validation and sixty percent (2232) of the dataset was used based on its better accuracy, precision, Recall, F-measure and ROC for training phase to create the model and forty percent (1488) instances for testing. In order to analyze data and evaluate patterns of datasets, KDD process model was applied. The design steps applied on the study were; data collection, feature selection, preprocessing data, transformation of data, data analysis, model building and evaluation of the identified knowledge. Finally the results of the experiment performance for J48 decision tree, Naïve Bayes and OneR are summarized including their precision, recall, F-measure, area under the ROC, Mean absolute error and accuracy, and presented with the expectation of the greatest performance of J48 from Naïve Bayes and OneR.*

# CLOUD COMPUTING ADOPTION MODEL FOR ETHIOPIAN HIGH SCHOOL EDUCATION

**BY: SAMUELGEZAHEGN**

**ADVISOR: DEGIF TEKA (PHD)**

## **ABSTRACT**

*The days are gone when people were required to purchase and manage new hardware and software to accomplish some task in information and communication technologies (ICTs). Cloud makes computing a lot simpler and takes accessibility of services to extreme beneficial level by the use of the internet. The extensive application of cloud computing is changing the way of dealing with ICT. It is expected that adopting the modern technology of cloud computing will reduce the cost of IT-based solution and services as well as of the ICT Infrastructure. Cloud computing has created a new concept to deal with software services and hardware infrastructure. Educational institutions are highly dependent on information technology for their teaching-learning service. However, despite the comprehensive literature, there are still limited studies related to the applied factors, challenges, barriers and exploring further challenges of cloud computing adoption at Ethiopian high schools. The thesis attempted to understand the planting strategy of cloud computing adoption model for Ethiopian high schools' education. Also, the objective of this research work was to find an alternative solution for acquisition and use of information technology to deliver efficient, flexible and scalable IT services for leveraging Ethiopian high schools' education from innovative technologies. Therefore, the proposed cloud computing adoption model can help schools to understand what modalities they need to develop and where they are on the cloud adoption spectrum. Interview, questionnaires, observation check list and a concise survey on cloud computing were used as the research methodology for this study. According to this thesis information acquisition method, the researcher decided hybrid deployment and SaaS service model for Ethiopian high school education. Moreover, the thesis provides implications of the research as future guidance to the decision makers.*

**Keywords:** - cloud computing, cloud computing adoption model, ICT, hardware, software, educational institution, high school

# **A FRAMEWORK FOR ICT EDUCATION OVER THE CLOUD IN PUBLIC SECONDARY SCHOOL: IN THE CASE OF WOLAITA ZONE**

**BY: ELIAS GANEBO**

**ADVISOR: DR. MESFIN ABEBE**

## **ABSTRACT**

*In Ethiopia, applying pedagogical ICT tools in secondary education is highly considered as a necessity. The need therefore for teachers' professional development should be aligned to the overall education objectives and the opportunities of the pedagogical use of ICTs. In this study, a research design included qualitative and quantitative approaches to collect data using questionnaires, interviews and document reviews from the Girara, Dalbo, Koyo, sodo comprehensive, Bogale Walelo and Uta secondary schools. To analyze the data the researcher used SPSS version 20 tools and to design the framework e-draw max tool is used. The existence of ICT policy for general education in Ethiopia influenced ICT initiatives in secondary education. For instance, few schools have received basic ICT tools and training; however, practical classroom ICT uses are more than just availing facilities. Thus, education system should focus on how to practice ICT in education for achieving effective eLearning. This paper focuses on key factors that enhance sustainable ICT frame work initiatives planning and implementation. It reviews relevant literatures about successful ICT use, narrates the obstacles and the requirements to the effective use of ICT. The findings show that ICT in education initiative should start with educational problem identification, build a vision, make a strategic implementation plan and deciding what the education system wants to achieve, not with the provision of technology. The ICT use in education becomes significant when is linked to teachers pedagogical knowledge. We developed an ICT framework which is a roadmap for planning, implementing, designing and delivering of electronic learning. A framework for ICT framework resources use and implementation in public secondary schools. The framework entails government support, stakeholders' involvements, guidelines and policies, training and recruitment, technology and infrastructures as key components. The framework expected beneficiaries are instructional designers, education policy makers, eLearning experts, teachers, and students.*

**Keywords:** ICT framework ICT, ICT in education, ICT planning, secondary education,

# **PREDICTING THE STUDENTS' PERFORMANCE BY USING DATA MINING CLASSIFICATION TECHNIQUES IN NORTH GONDAR SECONDARY SCHOOLS**

**BY: BELACHEW MENGIST**

**ADVISOR: AMANUEL AYDE (ASSIS. PROFESSOR)**

## **ABSTRACT**

*Data mining is one of the techniques to extract useful information from a huge data and support to make decision in various aspects. Educational Data Mining is concerned with developing new methods to discover knowledge from educational database and could be used for decision making in educational system. The overall aim of this study was to build a model that used to predict students' performance and the six step Hybrid model was followed as a guideline framework to address the research problem stated in this study. In this research, the researcher collected the student's data that have different information about their National Educational Assessment and Examination Agency examination result and then apply different classification algorithms using Data Mining tools for analysis of student's performance prediction in different subject areas. A total of 3477 students National Educational Assessment and Examination result records were selected from 17159 North Gondar secondary school students that are taken examination, and three secondary school students' records were considered. All the data were preprocessed with a detailed statistical summary. J48 decision tree, Naïve Bayes and PART algorithms were used to build predictive models. Then, the performances of models obtained from the best schemes of these algorithms were compared using performance metrics like Receiver Operating Characteristics curves, Precision, Recall and Accuracy of the model. The study used three algorithms J48, Naïve Bayes and PART rule induction to build a prediction model for academic performance of students. The predictive model obtained from PART-M2-C0.5-Q1 with Reduced attributes scheme was found to be the best model with 94.8231% accuracy followed by Naïve Bayes-O (92.6661%) with reduced attributes and J48-C0.25-M2 (92.5798%) with all attributes. Therefore, the result of the study was promising to predict the students' performance based on the result of data mining techniques. However, the future researches will apply more data mining algorithms by considering more data sets and attributes for better prediction.*

**Key words:** Knowledge Discovery in Databases, Classification, WEKA, Performance,

# **INVESTIGATING INFORMATION SECURITY MANAGEMENT PRACTICES IN COMMERCIAL BANK OF ETHIOPIA: CASE OF SODO DISTRICT WOLAITA SODO TOWN BRANCHES**

**BY: EYOB EYASU ERGADO**

**ADVISOR: AMANUEL AYDE (ASSI PROF)**

## **ABSTRACT**

*The growing dependence on information systems is widely accepted among the banks. Information systems can generate direct and indirect benefits as well as direct and indirect risks. Electronic information is essential to achieve bank's objectives. Its reliability, integrity and availability are significant concerns in most audits. The use of computer networks and particularly the Internet is revolutionizing the way business conducted. While the benefits have been enormous and vast amounts of information are now literally at our fingertips, these interconnections also pose significant risks to computer systems, information, and to the critical operations and infrastructures they support. The threats and security breaches are highly increasing in recent years globally. The objective of this study was to assess current information security management (ISM) practices of banking sector and to propose ISM Framework. In this work, attempts were made to examine and compare the available ISM frameworks and best practices. For this study qualitative research approaches were employed and the data were collected via questionnaire, document analysis, and interview. Since all the information that were collected are qualitative in nature, descriptive type of analysis was employed to analyze the collected data. The study results show that the surveyed banks are at diverse status in managing the security of their information systems. Moreover, they all are found to be at low level of ISM practice. A framework for ISM was proposed which contains sixteen main ISM domains and in turn these sixteen ISM domains are classified under three categories called administrative/organization, technical/operational, and physical/environmental security. Further, some of areas that require policies and procedures are identified. Moreover, future research areas were also suggested to enhance information security systems in banking operations.*

# IMPROVING THE ENERGY EFFICIENCY OF ROUTING PROTOCOLS IN WIRELESS SENSOR NETWORKS

**BY: BIRUK PAULOS GENEBO**

**ADVISOR: ASRAT MULATU (PHD)**

## ABSTRACT

*A Wireless sensor network (WSN) consists of a large number of low-cost sensor nodes that communicate through wireless technology. Popularity of wireless sensor networks has increased extremely due to the vast potential of sensor networks to connect the physical world with the virtual world. Sensor nodes collect environmental information and transmit it to the base station (BS). Based on the network structure, routing protocols in WSNs can be divided into three categories: flat routing, hierarchical or clustering routing and location based routing protocol. To be energy efficient, a clustering protocol applies cluster organization on the networks. It divides the sensor nodes into several clusters, and sends fusion cluster data through a cluster head, which is a representative node of one region. The distance from nodes the BS is too long in WSNs, that are still remain central to the applicability and operability of computational resources of the sensor nodes and limited energy, which has a direct impact on the energy efficiency of the network. In this thesis, we propose Improved Multi-hop Clustering Algorithm (IMHCA) for energy saving in wireless sensor networks. The improvement is based on modifying the cluster head selection technique and minimizing transmission energy of cluster head (CH) nodes to base station (BS). The proposed algorithm uses three performance parameters which are packets transmitted to base station, alive nodes during rounds and residual energy of nodes. The simulation of proposed algorithm is implemented using NS3. The simulation results confirmed the energy efficiency of the multi-hop cluster-based routing approach and demonstrate that, compared with some existing routing protocols; the proposed protocol attains significant enhancement in terms of energy efficiency of the networks and provides improved energy performance for WSNs.*

**Keywords:** Wireless Sensor Network, Routing Protocol, Energy Efficiency, Clustering, Multi-Hop Communication.

# APPLICATION OF DATA MINING TECHNIQUES TO DETERMINE CUSTOMER BEHAVIOR IN CARD BANKING USAGE

BY: TEWODROS DAWIT

ADVISOR: DEGIF TEKA (PH.D)

## ABSTRACT

*Nowadays banks are getting closer to users through many channels. Due to the advancement of technology card banking channels is the most popular mode of payments; with the existence of this technology the behavior of customer against banks is accelerating rapidly. Saving deposit and withdrawal now represents one of the biggest areas of concern in financial institution. To determine these types of customer behavior in Ethiopia there is no precondition taken, though we are adopting many banking technologies every time. Recognizing this problem, in this study an attempt was made to create a predictive model that helps to determine and analyze these types of customer behavior using data mining techniques. Experimental research methodology was used, and specifically the experiments were conducted following the Knowledge Discovery in Database process model. The dataset used in this study has been extracted from Bank's card banking application server. A total of 51,500 records selected. The study was conducted using WEKA software version 3.7.9 and four data mining algorithm namely, Simple k-means to cluster the data set and J48, MLP, Naïve Bayes algorithm used for classification. Since the data set has poor data quality, data preprocessing was done on the original data set. The major preprocessing activities include fill in missing values, remove outliers; resolve inconsistencies, dimensionality reduction, size reduction and data transformation. In this study the experimental result shows customer behavior using K-means clustering followed by J48 decision tree register the highest score of 90.8091% of accuracy and user acceptance testing shows that 91 % domain expert are satisfied with the developed model. Finally the result of this study revealed that applying data mining for determining novel type of customer behavior on card banking generate interesting rules with the following attributes (bank id, terminal id, channel type, transaction type, transaction amount, gender, and terminal location). One major challenge was getting labeled data. Future research directions are forwarded to come up with an applicable and reliable system in the area of this research by having labeled training dataset and enable automatic synchronization from data mining software.*

**Keywords:** Data Mining Techniques, Predicting Model, Algorithm, Card Banking

# **PREDICTING FACTORS OF VEHICLE TRAFFIC ACCIDENTS BY USING MACHINE LEARNING ALGORITHMS IN THE CASE OF WOLAITA ZONE**

**BY: AKLILU ELIAS KURIKA**

**ADVISOR: WONDWOSSEN MULUGETA (PH.D.)**

## **ABSTRACT**

*Vehicle traffic accident is one of the major agenda for the government in which special attention has been given to continuously reduce its occurrence and related risks. Wolaita zone is one of the major areas in which increased vehicle traffic accident occurs. Government and concerned bodies have given special attention to reduce accident rate in the country. By having this point as the motivating factor for study, this work tried to predict factors of vehicle accidents by using machine learning algorithms. We used unbalanced datasets with 1611 instances which was seven years data from 2005-2011 E.C. In order to analyze data and evaluate patterns of datasets, KDD process model was applied. The design steps applied on original data for preparing target datasets were; data integration, translation, selecting target datasets, preprocessing data, transformation of data, loading data to learning algorithms, pattern generations, interpretations and evaluation of the identified knowledge. The learning algorithms applied for experiments were J48 decision tree, Random forest tree, Rep tree, Naïve Bayes and Bayesian network classifiers. The experimental results, model evaluation and performance measurement shows that F-measure of J48 and Rep tree classifiers comparatively similar i.e. 97.87% and 97.80% respectively and Random Forest tree is performed less i.e. 90.9%. We identified the 1<sup>st</sup> experiment of J48 tree as the best model by performance and 23 best rules were generated from this experiment and best features were also identified. The most common victims, most commonly participated vehicles in accident and black spot areas for frequent accidents occurrences were identified. The findings of this study are significant for road and traffic authority and police commission for the revision and endorsement of the rules, regulations and standards related to traffic accidents; and therefore vehicle traffic accidents and related risks can be reduced generally in our country Ethiopia and specially at Wolaita Zone. We made accident data ready for further analysis in order to get most important patterns of datasets for any future researchers.*

**Key Terms:** Vehicle traffic accident, Decision Tree, Bayesian Classifiers, Machine Learning Algorithms, Performance measurement.

# RAINFALL PREDICTION USING DATA MINING TECHNIQUES: IN THE CASE OF WOLAITA SODO

BY: MIHIRETU GADEBO

ADVISOR: MESFIN ABEBE (PHD)

## ABSTRACT

*Rainfall prediction has been one of the most challenging problems around the world in the last century. Making an accurate prediction is one of the major challenges meteorologist are facing all over the world. Since ancient times, rainfall prediction has been one of the most important domains. Accurate and timely Rainfall prediction is a major challenge for the National Meteorological Agency of Ethiopia. In this study, the researcher investigated the use of data mining techniques in predicting the rainfall in Wolaita Sodo. This was carried out using J48 decision tree, JRip, PART rule induction and Multilayer perceptron classifier algorithms and meteorological data collected between 2009 and 2018 from National Meteorological Agency of Ethiopia from Hawassa branch. A data model for the data was developed and this was used to train the classifier algorithms. The performances of these algorithms were compared using standard performance metrics, and the algorithm which gave the best results used to generate classification rules for the mean rainfall variables. A predictive model was also developed for the Rainfall prediction program and the results compared with actual rainfall data for the predicted periods. The results show that given enough case data, Data Mining techniques can be used for rainfall prediction. To get a better awareness in choosing which model produced best prediction and higher accuracy, 8 experiments were done with J48 algorithm and 4 experiments were done on JRip, PART and multilayer perceptron classifiers, by inputting all the records with a 10 fold cross-validation mode, and inputting different percentage (%) of the record for testing the performance of the model. The next option used by the researcher to improve the performance of the model were to test if a better model could be obtained by excluding one or more of the input variables and training different models. J48 has an accuracy of 82.3925%, JRip has an accuracy of 61.2903, PART has an accuracy of 74.3817 and Multilayer perceptron has an accuracy of 73.3871%. Then J48 algorithm has shown better prediction performance. In the future, the effective use of information technology is important for National Meteorology to compete in today's world. The challenges faced during trying to make large, diverse, and complex dataset are solved by other classification algorithms which could yield better results.*

**Keywords:** Data Mining, Clustering, Classification, Artificial Neural Network, J48, PART, JRip

**A FRAMEWORK FOR INTEGRATING DATA MINING RESULTS WITH  
SELF-LEARNING KNOWLEDGE BASED SYSTEM TO SUPPORT  
DIABETES DIAGNOSIS AND TREATMENT  
BY: MULUKEN ASHAGRE**

**ADVISOR:- WONDWOSSEN MULUGETA (PHD)**

**ABSTRACT**

*Diabetes is the eighth leading cause of death among both sexes and the fifth leading cause of death in women including Ethiopia. Improper diagnosis, late diagnosis and treatment of the disease leads patients to disastrous outcomes. Therefore, the objective of this study was to develop a framework for integrating data mining results with self-learning knowledge based system (KBS) to support diabetes diagnosis and treatment. The knowledge acquired through document analysis and interview is modeled using decision tree, used for clinical diagnosis as well as for data triangulation in the development of the self-learning KBS. The diabetes type of the patient is identified through laboratory diagnosis. The rules for laboratory diagnosis are extracted through data mining from the prepared dataset. The dataset were collected from SNNP region Hawassa Referral Hospital, and Hosanna town Nigest Eleni Hospital. Experiments conducted using four classification algorithms named JRip, PART, J48 and REP Tree on the prepared diabetes dataset. All the experiments for each algorithm conducted on the option/mode of ten-fold cross validation test and with the default setting of the rest parameters with training set containing 6,174 (after SMOT) instances and four classes namely Type1, Type 2, Prediabetes and Gestational. After conducting an experiment on the four classification algorithms PART algorithm was selected by scoring 83.4321% which was the highest performance as compared to the other three classification algorithms. By converting the rules generated by the algorithm through converter application, they were integrated in the knowledge base of the self-learning knowledge based system. Finally, performance testing and user acceptance evaluation were performed in order to make sure whether the proposed solution meets its objectives. The System performance according to the domain expert's evaluation was scored 85.44% and the user acceptance testing scored 80.4% performance. However, this study needs a further effort to increase the system accuracy by collecting more dataset with high number of attributes and the study recommend it for further study.*

**Keywords:** framework, self-learning, KBS, data mining, JRip, PART, J48 and REPTree algorithm, diabetes diagnosis, diabetes treatment

# **PREDICTING THE STATUS OF TRAINEES TO ENGAGE IN COMPETENCY EXAMINATION USING DATA MINING TECHNIQUES: THE CASE OF SAWLA PROVINCE**

**BY: NATNAEL OTORO CHUNARE**

**ADVISOR: - MESFIN ABEBE (PHD)**

## **ABSTRACT**

*Now a day's data mining is the most powerful tool which helps to improve the performance in any related fields which want to perform better in their day lives either in the private business sectors or in organizational business sectors, its application has positive impact when it is used in the specific area. EDM is applied in training areas for data mining. TVET sector is a crucial sector in the development of small enterprises when we come to SCIC it is also most important sector for GTP performance but if we see the performance status of the trainees in COC exam it is the worst. In order to determine the problems of the trainees COC the need to know the status of trainees and also to know the most contributing attributes in COC performance need to be application of EDM In this study the application of EDM was performed to know the status of trainees in the training sector of Sawla Construction and Industrial collage focused to know the problems of trainees by evaluating their status in COC performance and to do this the researcher followed KDD process. To conduct the research data's used are 4652 divided 90:10 for training set and testing instances 4186 and 466 respectively. To do this, the researcher applied classification techniques and employed J48, JRip, REPTree, SMO and Baysian net classifiers. From the experimentation the f-measure average accuracy for JRip is 99.81, J48 is 99.78, REPTree is 99.80, SMO is 99.81 and baysian net is 99.67 and the JRip and SMO has the same accuracy level and the run time isfor JRip is 0.04 seconds where as SMO is 1.02 seconds which is late. JRip is model achieves the best accuracy when compared to that of the other models. The other finding was seen from the experiment is that the most contributing variables in COC performance are demonstration skill of the trainees, oral exam values, education level of the trainees assessed the level, the qualification of the trainer profile which gives training, the prior learning result of the trainees and the cooperative training which the trainees have taken.*

**Keywords:** Educational Data mining, JRip, REPTree, J48,SMO,Baysian net Status, Competent, Not Yet competent

# TEXT-INDEPENDENT SPEAKER IDENTIFICATION FOR HADIYYISA LANGUAGE

BY: PETROS HAILE MENCHA

ADVISOR: WONDWOSSEN MULUGETA (PH.D.)

## ABSTRACT

*Speaker recognition is biometrics for identifying individuals by their demanded identity based on the characteristics extracted from their voice. Identifying individuals who are claimed by voice is a big problem in various applications. In this research, Text Independent Speaker Identification for Hadiyyisa Language (TISIH) is developed to identify the speaker by using speech expression. The established TISIH model has two components: (1) Front end processing and (2) backend processing component. The front end component performs activities such as speech acquiring, preprocessing, feature extraction and feature normalization. Silence removal and pre-emphasis are the tasks performed during pre-processing. Mel Frequency Cepstral Coefficient (MFCC) feature is selected and Cepstral Mean Normalization (CMN) is applied to normalize the feature. The backend component performs developing the speaker model and training the speaker model to the recognizer. Gaussian Mixture Model (GMM) is followed and the K-means algorithm is used to develop a GMM for each speaker and optimized by EM algorithm. The model is trained on a speech collected from 20 speakers (12 males and 8 females), using isolated word utterances of Hadiyyisa number. And it is tested by 8 speakers (5 genuine and 3 impostors) and utterance randomly generated three digits Hadiyyisa number code was taken from each speaker. Failure to Enroll Rate (FER) is computed to measure speaker enrolment performance and the recognizer performs fully without failure on the training data. FNMR and FMR are computed to evaluate identification and it has an average error rate of 18.9% and releases an average accuracy of 81.1% at different threshold values.*

**Key Terms:** Speaker Identification, Biometrics, Speaker Recognition, Text Independent, GMM, MFCC.

# IMPROVING THE AUTHENTICATION LOCAL AREA NETWORKS

BY: ROBA SEYOUM TOLA

ADVISOR: PROF. DR. SEBASTIAN NIXON J.

## ABSTRACT

*The WLAN Standard 802.11n is the most popular wireless network nowadays. However, the network performance is always important anxiety for users who are ready to migrant from wired to wireless network. This thesis work was planned to analyze the network performance of IEEE 802.11n physical characteristics of wireless network while running different applications on different wireless network personal computer using physical characteristics of HT PHY5.0GHz 802.11n and in different data rate. Applications included Database, HTTP and FTP. For the experiment, a wireless LAN was built that included 10 wireless clients and an Access point. The experimental test was completed to analyze 802.11n standard wireless local area network performance on the network with different level of security with Database, FTP and HTTP server application. In order to access related application over the cloud there must be an internet connectivity to assist the network to accomplish their server remotely for the various application deployed over the network. The network device such as router is configured using Open Shortest Path First routing protocol to decrease utilization and create specific load distribution over the network. In this thesis the three scenarios considered are No Security Scenario, Limited Security*

*Scenario and Advanced Security Scenario. The level of protection used was 802.11n to filter and block some applications and their performance is analyzed. Twenty workstations are used in the simulation which all accesses the Database, FTP and HTTP server under different scenarios. Various scenarios were evaluated through simulations using OPNET17.5 to explain the property of unusual levels of safety on a network using 802.11n wireless network standard. The delay time of an access point dependent on the amount of traffic load it has. The higher the load, the greater the delay time. Therefore, an access point should always keep a limited number of work stations connect to it if budget available in order to maintain a good quality of service for the 802.11n wireless network access point increases.*

**Keywords:** WLAN, IEEE 802.11n, Network, OPNET17.5, Network Simulation

# PERFORMANCE ANALYSIS OF LI FI TECHNOLOGY

BY: TESMAMU TEKUWASH

ADVISOR: PROF. DR. SEBASTIAN NIXON.J

## ABSTRACT

*Light Fidelity (LiFi) is a wireless technology that transmits high-speed data using visible light communication (VLC) in network systems. Light Fidelity technologies are becoming well-liked due to their important role in different applications such as Hospitals, Smart Lighting, Underwater Communication and Harmful Environments. Li – Fi is that light can't pass through objects, so if the receiver is by accident blocked in anyway, and then the signal would immediately cut out. If the light signal is blocked, or when you need to use your device to send information you can flawlessly switch back over to radio waves. Light Fidelity technologies are kinds of performance analysis in terms of Signal – to – Noise Ratio (SNR) and Bit – Error Rate (BER). We have done a comparative study on different performance analysis in Li Fi technology. It was done in experimental approach to the proposed visible light communication module by realizing physical layer models characterizing the visible spectrum mapped to a variety of optical modulation schemes. We also considered device mobility and direction which exclusively impact an optical receiver. We also described the adopted physical models, the structure of the NS3 model implementation, and expressed performance assessment for Radio Frequency (WiFi) / LiFi (VLC) situation. In this case, analyze the downlink and uplinks were paired using the combination of visible light communication component and accessible Network simulator version three in Radio Frequency modules. When we used the network simulator show that how this situation can be studied in terms of the Light Fidelity network in the visible light communication of Signal – to Noise – Ratio and Bit – Error – Rate parameters, and in the resulting of the Network Performance measured.*

**Keyword:** Li Fi, VLC, SNR BER, RF, NS3

# IMPROVING WIRELESS NETWORK PROTOCOL WPA2-PSK

BY: TSEGA YOHANNES

ADVISOR: PROF. DR. SEBASTIAN NIXON.J

## ABSTRACT

*Nowadays wireless technology is common and widespread in the world, and used in many businesses. The technology needs developed quality of the service and security issues. In this study we considered only on the security issues especially on the recent wireless security protocol WPA2, because WPA2 is the currently applicable in many WLAN connections and best relatively from the previous protocols. This study also verified that a wireless intruders test in WPA2 using cracking tools with word generator tools to compare the encrypted key of wireless network with the file contains the captured packets as alphanumeric letters with the help of network monitoring and analyzer tools of window 10 for the improvement of WPA2's security. In this research CommView, aircrack-ng, and PWGen tools are applied to confirm the dictionary attack is applied on WPA2-PSK and also we examined the AES-CCMP algorithm strength by comparing with the previous algorithms which are in WPA and WEP. AES-CCMP algorithm generates more keys than TKIP or RC4. So, we proposed to discuss on the benefits and vulnerabilities of WPA2 protocol to improve its security by suggesting how to use wireless network securely. Adding other asymmetric algorithms like Diffie-Hellman-Algorithm or Elliptic Curve Diffie-Hellman can enhance the security level of WPA2-PSK algorithm. Elliptic Curve Diffie Hellman algorithm key exchange method is adopted from Diffie Hellman. Their difference is asymmetric public key encryption method.*

**Key words:** WPA2, AES, CCMP, Authentication, Encryption, ECDH, DH algorithm

**ANALYSIS OF THE HEALTH INFORMATION SECURITY  
MANAGEMENT PRACTICES OF HEALTHCARE ORGANIZATIONS IN  
SNNPR, ETHIOPIA THE CASE OF CHENA WOREDA WACHA  
MELESE ZENAWEI GOV'T HOSPITAL.**

**BY: WELDETENSAY TEKLETSADIK**

**ADVISOR: Dr. YONAS HAGOS**

**ABSTRACT**

*Information security in the healthcare area is an issue of rolling significance. In place of the health management information system (HMIS) of Ethiopia had been knotted through a number of problems, the objective of this study is to investigate, suggest and recommended the security practices with concern to the protection of this sensitive information at a health care organization level in chena woreda wacha melese zenawei gov't hospital. The goal of this study was to analyze the health information security management practice of chena woreda wacha melese zenawei gov't hospital. The participants contain in this study were managerial staffs, all health care providers, patient record management staffs, and a principal person from health management information system (HMIS) unit of the hospital. Data collected on information security management system domain parts. Quantitative and qualitative approaches were used to collect data. Next to the end after planning, the entire process possible guidelines and suggestions were recommended for healthcare in order to check the sensitive information from unauthorized access and keep information security. The researcher outcome result was there is no a well-known information security policy and a management body accountable for protection information security in the hospital. The result furthermore showed that from the asked vulnerabilities, staffs training awareness and education was the top placed issue, malicious software taking the minimum.*

**Keywords:** information security, healthcare information security, healthcare providers, Information system, healthcare organization



## 7. School of Law

LLM in Criminal Justice and Human Rights

# **PAROLE IN THE ETHIOPIAN CRIMINAL JUSTICE SYSTEM: THE LEGAL AND INSTITUTIONAL FRAMEWORKS AND THE PRACTICE IN SELECTED ZONES OF SNNPR**

**BY: PETROS FANTA**

## **ABSTRACT**

*Since crime is inevitable in any society, the role and purpose of criminal law in regulating criminal behaviors and punishing the wrong doer has become increasingly important. This means that criminal law is instrumental not only in deterring and preventing crimes through the prescription of punishments but also to reform and rehabilitate the criminal, so that the offender can be brought back to society as a law-abiding citizen. In other words, reforming and rehabilitating the offender remain the ultimate objective of criminal law. To this end, criminal law prescribes various mechanisms and procedures, which the judicial organs and law enforcement authorities of the state are bound to follow and implement in practice in order to render justice. Parole is one such mechanism that allows an offender to serve part of his/her prison sentence in the community upon certain conditions. The reintegration and rehabilitation of offender is the main objective of the parole system. Under the parole system, the offender is placed under supervision and is required to abide by the conditions that are prescribed to reduce the risk of re-offending and enhance his/her re-integration into the community. Keeping this understanding in mind, the thesis dwelled upon the law and practice of 'conditional release' or 'parole system' in Southern Nations Nationalities and People's Region (SNNPR). More specifically, it investigated how the parole system has been regulated in the law and implemented in practice, and how it functioned in practice in selected zones (Wolaita, Hadiya, Kambata-Tambaro, and Silte zones) of SNNPR. The objective of this research was to highlight the adequacy of law that regulates the parole system as well as to reveal the discrepancy between law and practice in selected zones. To achieve the latter, the thesis adopted socio-legal approach and accordingly, analyses qualitative data collected through semi-structured interviews from purposively selected research subjects (mainly judicial and law enforcement officials) in four zones of SNNPR. The study found a number of problems in current law and practice. Specifically, analyses of law and empirical investigation revealed that there was a lack of clear and specific guidelines, and uniform procedure regarding regulation of parole, absence of independent and intermediate and supervisory bodies to produce reports for prison administration authorities as well as to supervise, monitor and assist the parolee during and after conditional release, absence of the community, the victim and the offender's role in parole decision making process, and the reluctance of the government to bring legal and administrative reforms. In other words, while conditional release by parole is an important mechanism of*

*rehabilitating the offender, there are legal and practical gaps which make the parole system ineffective in selected zones of SNNPR and impede it from achieving its intended purpose.*



## **8. School of Vetrenery Medicine**

**MSc in Veternary Clinical Medicine**

**FIELD BASED TRIAL ON THE COMBINED EFFECT OF PAPAYA (*CARICA PAPAYA*) SEED, GARLIC (*ALLIUM SATIVUM*) BULB, AND PUMPKIN (*CURCUBITA PEPO*) SEED ON GASTROINTESTINAL PARASITES OF SHEEP IN BOLOSORE DISTRICT OF WOLAITA ZONE, ETHIOPIA**

**BY: MATUSALA MULACHEW**

**MAJOR ADVISOR: WALE TEFAYE (DVM, MSC, ASSOCIATE PROFESSOR)  
CO-ADVISOR: NAOD THOMAS (DVM, MSC, ASSOCIATE PROFESSOR)**

**ABSTRACT**

*Gastrointestinal nematodes control in sheep has been dominated by use of synthetic anthelmintic. However, the high cost and anthelmintic resistance has stimulated the search for alternative solution as ethno veterinary medicine. This study was conducted in Boloso Sore smallholder farm household, Wolaita Zone, from November, 2018 to April 2019 to evaluate anthelmintics efficacy of combination of Garlic bulb, Papaya and Curcubita seed against gastrointestinal nematodes. A purposive sampling was employed to select 48 naturally infected local sheep from source population based on the egg count and age of sheep. Animals were randomized to 6 experiment groups of which four groups made up of the combinations of Garlic, Papaya and Curcubita and the remaining treatments were albendazole and non-treated (water) groups. Fecal samples were collected from each sheep before and after treatment and modified McMaster method was used to count eggs. Third stage larvae (L3) were recovered from the fecal cultures by the Baerman technique. Blood samples were collected from the jugular vein both before and after treatment from each group of sheep to determine the percentage of red blood cells per volume of blood. The efficacy of each preparation was determined by Fecal Egg Count Reduction Test (FECRT) using R Windows software. Means egg counts after treatment were compared between groups using paired t-tests. The percentage reduction in mean fecal egg count, after 14 days of treatment, for group A, B, C, D, E and F were, 96.2%, 88.84%, 89.8%, 90.36%, 97.01% and 22.8% respectively. There was statistically significant difference among treatment and negative control group ( $p=0.00$ ). In addition, the baseline mean PCV value before treatment was  $30.13 \pm 0.743$  for group A,  $27.61 \pm 2.13$  for group B,  $27.16 \pm 1.75$  for group C, for group D,  $27.7 \pm 3.4$ , for group E,  $24.23 \pm 1.5$  and  $25.13 \pm 2.23$  for group F. The finding is within a normal range of 27-45 %. After treatment the PCV value raised slightly for all groups except significant increase for group E. Generally, these findings indicate that the combination of Garlic, Papaya and Curcubita are effective against gastrointestinal nematodes in sheep in the study area. Further clinical trials, extraction and economic viability should be tested.*

**Key Words:** *Combination, Curcubita, Egg count, Efficacy, Garlic, GIN, Papaya, Sheep,*



## 9. College of Health Sciences and Medicine

## **School of Medicine-General Surgery**

**TREATMENT OUTCOME AND ASSOCIATED FACTORS OF SURGICALLY TREATED SECONDARY GENERALIZED PERITONITIS AMONG ADULT SURGICAL PATIENTS IN WSUTRH HOSPITAL, SNNPR, ETHIOPIA**

**BY: SHEREFA HUSSAIN (M.D, GENERAL SURGERY)**

**ADVISORS- ABEBE (M.D, ASSI. PROF OF SURGERY)**

**AMENE ABEBE (ASSI. PROF)**

**ABSTRACT**

**INTRODUCTION:** *Peritonitis is a life-threatening condition with a multitude of causes that can vary with geographic location. Despite a better understanding of pathophysiology, advances in diagnosis, surgery, antimicrobial therapy and intensive care support, secondary generalized peritonitis remains a potentially fatal illness.*

**OBJECTIVE:** *To Assess Treatment Outcome And Associated Factors Of Surgically Treated Secondary Generalized Peritonitis Among Adult Surgical Patients In WSUTRH SNNPR, Ethiopia, From Aug. 2017 - August 2019 G.C.*

**METHODS:** *-The study employed a retrospective cross-sectional design. Study participants were identified from the hospital admission/discharge records, patient cards and operation log books which were collected by pretested data collection format by trained final year medical students. Data were analyzed using SPSS Version 20 software. The analyzed data were presented using charts, tables, graphs and described using texts.*

**RESULTS:** *A total of 260 subjects were identified out of this the record of 217 where found and analyzed meeting the definition of secondary Generalized peritonitis who underwent Laparotomy during the study period of two year from August 2017 up to August 2019 G.C.. Most of the patients were males; with M:F ratio of 3.6:1. Majority of the patients presented with pain (100%) associated with bowel habit change. The most common cause were Gangrenous SBO 52(23.5%), Traumatic perforation of small bowel 35(16.5%), Gangrenous SV 27(12.4%) appendicular perforation 22(10.1) Tumor perforation 10(4.6%), PUD perforation 12(5.5%), Ileo-sigmoid knotting 6(2.6%). Resection & Anastomosis was the most commonly performed procedure Which account the majority 73(33.6%). Overall morbidity was 42.4% and mortality (un successfull outcome) was 11.5%.*

**CONCLUSION & RECOMMENDATION:** *Generalized peritonitis is a common and significant surgical problem in Ethiopia. The most affected group was the young individuals who are most involved in social productivity and thus has an impact on the economy of the society. Parameters such as aggressive fluid and electrolyte resuscitation with vital sign monitoring, type of surgical procedures and use of appropriate antibiotics should be emphasized in order to improve survival the patient should come early for treatment.*

**School of Public Health-General Public Health**

**MAGNITUDE OF ANEMIA AND ASSOCIATED FACTORS AMONG  
TUBERCULOSIS PATIENTS IN WOLAITA ZONE, ETHIOPIA**

**BY: NAPOLION ABAYNEH (BSC)**

**MAJOR ADVISOR: DR.TSEGAYE DEMESE (PHD, ASSOCIATE PROFESSOR)**

**CO- ADVISOR: - MR.SOLOMONABREHA (MPH,ASSISTANT PROFESSOR )**

**ABSTRACT**

**Background:** *Anemia and tuberculosis are major public health problems in the world .The prevalence of anemia among patients with tuberculosis varied from study to study. There is limited and inconsistent literature on the association between anemia and tuberculosis.*

**Objective:** *To determine the magnitude of anemia and associated factors among Tuberculosis patients in Wolaita zone.*

**Method:** *Institutional based cross-sectional study was conducted from April 2019 to Jun 2019 in 78 health facilities in Wolaita zone. Out of the 78 health facilities,23were randomly selected. A total of 417 TB patients were involved in the study.TB registration book was used as sampling frame. The socio-demographic data were collected from each study participant, using pre-tested structured questioners. The blood sample was collected for hemoglobin determination and malaria parasite identification. In addition, stool examination was done with direct method for identification of intestinal parasite The collected data were entered using the Epi data statistical software and exported to Statistical Package for the Social Sciences Version 20.0 for analysis. Logistic regression model was used to identify the risk factors. Variabels having  $p < 0.25$  in bivaritelogestic were taken into multivariable logesticregression analysis. The 95% confidence interval and odd ratio were used to present the association between anemia and TB. Independent variables having  $P < 0.05$  was taken as statistically significant.*

**Result:** *Among 417 TB patients, 171 (41.0%) participants were found to be anemic. Of which seventy-nine (42.9%) were female. Patients in intensive phase were at increased odds of contracting anemia . (AOR 2.19, 95% CI 1.43,3.36), ( $P < 0.00$ ). Pulmonary TB patients (AOR 1.71, 95% CI 1.07,2.75), ( $P < 0.024$ ), monthly income  $< 500$  (AOR 3.96, 95% CI 1.38,11.37), ( $P < 0.010$ ) were more at increased odds of accuiringanemia.*

**Conclusion:** *The prevalence of anemia in the study area was high among TB patients.The duration of TB treatment, monthly incomeandtypes of TB were identified as significantly associated with anemia among TB patients Awareness creation and nutrition education on the importance of taking iron supplementation and nutritional counseling on consumption of iron-rich foods are recommended to prevent anemia in TB patients.*

**Keywords:** Anemia, Hemoglobin, BMI.

# UTILIZATION OF LONG ACTING CONTRACEPTIVE METHODS AND ASSOCIATED FACTORS AMONG MARRIED WOMEN IN GIBE DISTRICT, HADIYA ZONE, SOUTHERN ETHIOPIA

BY: ABRAHAM DOBOCH (BSC)

ADVISOR: MENGISTU MESKELE (MPH/RH, ASSISTANT PROFESSOR)

## ABSTRACT

**Background:** *The utilization of long acting contraceptive method in developing countries is very low. However, limited study has been carried out in associated factors for low utilization of long acting contraceptive method among reproductive age married women.*

**Objectives:** *To assess utilization of long acting contraceptive method and associated factors among married women.*

**Methods:** *Community based cross-sectional study was conducted in Gibe district from April to June 2019. By simple random sampling 456 reproductive ages married women were selected in this study. Multi-stage sampling technique was employed. First, the selected local administrative units (kebeles) of residents were taken from such lists in the district by using simple random sampling. Secondly, the sample size was proportionally allocated to each selected unit (kebeles) by population sizes. Data were collected by using a structured questionnaire through face to face interview. Descriptive statistics was done for univariate results, and we applied bivariate logistic regression to look for crude association and multivariable logistic regression along with 95% confidence intervals (CI) used. Statistical significance was decided at  $P < 0.05$ .*

**Result:** *The prevalence of long acting contraceptive method utilization in the Gibe district was (22.7%). Previous history of LACM use (AOR=13.42;95%CI:7.29-24.71), Age(AOR=5.05;95%CI:1.81-14.08), mother occupation[AOR=4.37;95%CI:2.00-9.5], Attitude towards LACM[AOR=3.55;95%CI:1.89-6.70], and knowledge about LACM(AOR=2.74;95%CI:1.29-5.84), were statistically significant at 5% and were to be associated with the LARC use.*

**Conclusion and recommendation:** *-The overall prevalence of long acting contraceptive method was low. Knowledge about LACM, attitude, previous history of LACM use, age of women and mother occupation have significant association with use of long acting contraceptive and recommended health promotion activities on the benefit of LARC need to be undertaken to increase knowledge and usage of long acting contraceptives.*

**Key words:** Utilization, long acting contraceptive method, Ethiopia.

**ASSESSMENT OF HAND WASHING PRACTICE AND ITS ASSOCIATED FACTORS  
AMONG WOMEN'S WHO HAVE CHILD 0-24 MONTHS IN MAREKA WOREDA DAWRO  
ZONE, SOUTH ETHIOPIA**

**BY: TEMESGEN MEKONEN (BSC)**

**ADVISOR: DR. AMHA ADMASIE (PHD)**

**ABSTRACT**

**Background:-** *Mother's hand washing practice is an important measure to prevent the spread of childhood diarrhoea ARI and other infectious disease. Hand washing still being practiced to a very low extent especially at critical moments therefore assessing the status of hand washing practice and its associated factors among mothers having 0-24 month child before describing the result of study has been conducted.*

**Objective:** *To assess the hand washing practice and associated factors among mothers of children aged from 0-24 months in Mareka Woreda Dawro Zone, southern Ethiopia in 2020 G.C.*

**Method:** *A community based cross-sectional study was conducted among systematic randomly selected 520 women's who have 0-24 month's age children of Mareka Woreda Dawro Zone. Data were collected by using interviewer administered pre-tested structured questionnaires by trained data collectors. Data were checked for completeness, edited manually, coded and entered in to Epi data 3.1 and exported into SPSS version 21 for analysis. Multivariate logistic regression analysis has been based on the level of significance level at  $p < 0.05$ .*

**Result:** *Fewer (27.1%) of the mothers wash their hands with soap and water after toilet visit, after cleaning child's bottom (28.5%), before cooking (6.2%), before eating (6.9%) and before feeding the child (21.2%). Majority (72.9%) of the mothers doesn't wash their hands with soap and water after toilet visit. After the cleaning a child who has just defecated (71.5%), before feeding baby (78.8%), before cooking food (93.8%) and before eating food (93.1%). Availability of water near to the toilet and hand washing with soap was significantly associated to the hand washing practice of mother with COR: 0.39(0.15, 0.99), AOR: 5.26 (95%CI, 1.99, 13.69) and COR: 0.22(95%CI. 0.11,0.41) AOR: 0.40(0.18, 0.89) respectively.*

**Conclusion:** *The hand washing practice at critical times of study participants was found to be low. A significant proportion of mothers of under two year children have a poor hand washing practice at critical times. A availability of water near to the toilet and soap needed to wash their hands after toilet visit was significantly associated with the practice of HWWS on critical moment and It is necessary to increase the access to water and to improve the awareness of respondents to improve their hand washing practice at critical times.*

**Keywords:** Hand washing, good handwashing practice, and critical moment/time.

# Utilization of integrated community case management of common childhood illnesses and associated factors in Kindo Didaye District Southern Ethiopia

BY: ASEFA BERHANU ABATE (BSC)

MAJOR ADVISOR: MIHIRETU ALEMAYEHU (MPH/RH, ASSISTANT PROFESSOR)

CO-ADVISOR: KASSA DAKA (PHD, ASSOCIATE PROFESSOR)

## ABSTRACT

**Back ground:** Large proportion of children in sub-Saharan Africa continues to die due to malaria, diarrhea, and pneumonia before their fifth birthday. Ethiopia is one of six countries account for half of the global under five deaths. Bringing integrated community case management service into the community has the potential to lead significant reductions in under-five mortality due to these causes. Utilization of the service is one of the ways to reduce under-five child mortality. However utilization of this service and its predictor is not studied in study area. So level of service utilization and associated factors in the community need to be explored in Kindodidaye district, Southern Ethiopia, 2019.

**Objective:** To determine utilization of integrated community case management service of common child hood illness and associated factors at health posts in Kindodidaye district, Southern Ethiopia, 2019.

**Methods:** A community based cross sectional study was conducted from May1 to June7, 2019 in kindodidayedistrict. Multistage sampling technique was used to select 624 sick under five children with, malaria, diarrhea, and pneumonia in two weeks before this study. Structured questionnaire was used for data collection. The data were entered in to Epi data version 3.1 and exported to SPSS version 20 for analysis. Descriptive statistics, bivariate and multivariate logistic regression analyses were done and the statistical significance was declared at  $p$ -value  $<0.05$ .

**Result:** The study indicated that only 66 (10.6%) (95% CI: 8%-13%) of children sick with common childhood illness utilized integrated community case management. Poor household (AOR=2.99, 95%CI=1.37, 6.53), awareness of the service availability at health post for sick children (AOR=4.74, 95%CI=1.39, 16.10), distance with in 30 minute from home to health post (AOR=5.23, 95%CI=1.69, 16.19) were significantly associated with integrated community case management service utilization.

**Conclusion and recommendation:** Integrated community case management service utilization was very low in the study area. So need to create awareness to community on service availability at health post, link the service with other disease preventive outreach services to reach sick children at distant on short plan, build additional health post on long plan.

**Key words:** Health post utilization, malaria, diarrhea, pneumonia, Kindodidaye

# FULLY VACCINATION COVERAGE AND ASSOCIATED FACTORS AMONG CHILDREN AGED 12 TO 23 MONTHS IN DEMBA GOFA DISTRICT, SOUTHERN ETHIOPIA

BY: BAHRU BELACHEW OSHE

MAJOR ADVISOR: TADELE DANA (MPH/RH, ASSISTANT PROFESSOR)

CO-ADVISOR: CHALA WEGI (MPH, ASSISTANT PROFESSOR)

## ABSTRACT

**Back ground:** Fully Vaccination is the administration of vaccines/antigens that are recommended for children before celebrating their first birth day (one dose BCG; three doses of OPV, Pentavalent and PCV each; two doses of Rota and one dose of Measles vaccines). According to the surveys conducted in different parts of Ethiopia, vaccination coverage was low and which made the children at risk for vaccine preventable diseases. To think and respond about the risks successfully, almost all information on vaccination coverage and associated factors at district level is required to minimize vaccine preventable diseases.

**Objective:** To Measure Fully Vaccination Coverage and Associated Factors among Children Aged 12 to 23 Months in Demba Gofa district, Southern Ethiopia. 2019.

**Method:** A community based cross-sectional study was conducted from April 22 to May 24 2019. Multistage sampling techniques were used to select a total of 677 mothers who have children 12-23 month of age. Data collection was done using pre-tested structured questionnaire and data data was edited, coded, entered and cleaned using EpiInfo v.3.1 and analyzed using SPSS V.20. Bivariate and Multiple logistic regressions were used to understand the association between dependent and independent variables. This study was done after ethical approval is obtained from Wolaita Sodo University Ethical Review Committee.

**Result:** From total children surveyed, only 309 (47.0%) were fully vaccinated, 274 (41.7%) were partially vaccinated and 74 (11.3%) were not vaccinated at all. This study showed that children are more likely to be vaccinated if maternal healthcare decision made jointly with husband AOR=1.88 (95% CI: 1.06, 3.34), maternal healthcare decision made by mothers AOR=4.03 (95% CI: 1.66, 9.78), mothers who followed PNC AOR=5.02 (95% CI: 2.28, 11.05), mothers knew age the child completes vaccination AOR=2.54 (95% CI: 1.04, 6.23) and mothers who replied vaccination is not make child to sick AOR=0.32 (95% CI: 0.16, 0.64).

**Conclusion:** Fully vaccination coverage of the district among children aged 12-23 months relatively higher than national and at the same level with the regional coverage. The study showed that maternal healthcare decision making, PNC, knowledge on age at which a child completes vaccination & replied vaccination is not make child to sick were significantly associated with fully vaccination of children. So, the district and health institutions should improve maternal health care service utilization and knowledge on fully vaccination.

**Key Words:** fully vaccination, Children, Demba Gofa.

**PREVALENCE OF ABORTION AND ASSOCIATED FACTORS AMONG WOMEN  
IN THE REPRODUCTIVE AGE GROUP 15-49 YEARS ATTENDING MATERNAL  
HEALTH SERVICES AT WOLAITA SODO UNIVERSITY TEACHING AND  
REFERRAL HOSPITAL, SOUTHERN ETHIOPIA**

**BY: FEKADU DAKA**

**MAJOR ADVISOR: AMENE ABEBE (MPH, ASSISTANT PROFESSOR)  
CO-ADVISOR: MIHIRETU ALEMAYEHU (MPH, ASSISTANT PROFESSOR)**

**ABSTRACT**

**Background:** *Abortion means termination of pregnancy before 28 weeks of gestation. It is associated with increased risk of subsequent placenta previa, ectopic pregnancy, preterm birth, infertility, pelvic inflammatory disease and maternal mortality.*

**Objective:** *The aim of this study was to assess the prevalence of abortion and associated factors among women in the reproductive age group 15-49 years attending maternal health services at wolaita sodo university teaching and referral hospital,*

**Methods:** *Institution based cross-sectional study was conducted from October 30-December 30, 2018 among 601 women in the reproductive age group 15-49 years attending maternal health services at Wolaita Sodo university teaching and referral hospital using systematic sampling technique. After getting informed consent data collection had done through face to face interview by trained midwives. The data was entered into EpiData version 3.1. Then exported to statistical package for social science software version 20 for analysis. In the bivariate logistic regression analysis variables with p-value < 0.25 were entered into multivariate logistic regression analysis to see independent association with dependent variable. Multivariate logistic regression analysis was used to determine the odd ratio and 95% confidence interval. In the multivariate logistic regression analysis independent variables which were statistically significant association with dependent variable were declared at p-value < 0.05.*

**Result:** *The overall prevalence of abortion was 169(28.1%), from which 126(21%) was induced abortion and 43(7.1%) was spontaneous abortion. Monthly income having <501ETB (AOR=2.89; 95%CI(1.52-5.52)) and 501-1000ETB (AOR=2; 95%CI(1.07-3.75)), lack of contraceptive use (AOR=2.04; 95%CI(1.16-3.6)), lack of contraceptive access (AOR=2.13; 95%CI(1.17-3.89)), lack of contraceptive of choice (AOR=2.48; 95%CI(1.43-4.29)), unwanted pregnancy (AOR=3.54; 95%CI(2.16-5.82)) and rape (AOR=2.69; 95%CI(1.45-4.99)) were found significantly associated with abortion.*

**Conclusion:** *The overall of prevalence of abortion in this study was high. Monthly income having < 1000 ETB, lack of contraceptive use, lack of contraceptive access, lack of contraceptive of choice, unwanted pregnancy and rape were found significantly associated with abortion.*

**Key words:** Abortion, maternal health services, Southern Ethiopia

# LIFESTYLE MODIFICATION PRACTICES AND ASSOCIATED FACTORS AMONG HYPERTENSIVE PATIENTS ATTENDING WOLAITA SODO UNIVERSITY TEACHING REFERRAL HOSPITAL, SOUTHERN ETHIOPIA

BY: BERHANU KOLISHO

MAJOR ADVISOR: WONDIMAGEGN PAULOS (MPH, ASSI. PROF, PHD CANDIDATE)

## ABSTRACT

*Background: Lifestyle modification practice is a non-pharmacological approach that can be used as an initial treatment of non-communicable diseases before the start of medication and as an adjunct in those already on drug therapy. Therefore, it could have powerful effects to prevent morbidity & mortality in diagnosed hypertensive patients. The study intended to assess the magnitude and associated factors for lifestyle modification practice among diagnosed hypertensive patients. Objective: To assess lifestyle modification practice and associated factors among hypertensive patients attending Wolaita Sodo Univerisity Teaching Referral Hospital, Southern Ethiopia.*

*Methods: A facility based cross- sectional study was conducted among 336 diagnosed hypertensive patient s' age  $\geq 25$  years from Nov, 1/2018 to Dec, 30/2018 E.C.*

*The study population was selected from the source population using systematic. Data were entered to Epidata version 3.1 and exported to Statistical Package for Social Sciences (SPSS) version 20.0 for analysis. A binary logistic regression model was fitted to determine independent predictors of lifestyle modification practice among hypertensive patients. Adjusted odds ratio with 95% Confidence Interval was used to present the results.*

***Results:** From the total of 336 study participants, more than half 193(57.6%) of them were males. The mean age of respondents was 52.56(SD  $\pm$ 12.007 years). Two hundred twenty four (66.9%) of the study participants were married and Eighty four (25.1%) had completed primary education. The computed mean of lifestyle modification practice of the respondents was 40.3%. On the multivariables logistic regression model weight management AOR=8.866(3.662, 21.466)  $P < 0.0001$ , Physical inactivity AOR=0.046(0.009, 0.233)  $P < 0.0001$ , pre-diabetic level of fasting blood sugar AOR=2.212(1.137, 4.303)  $P = 0.019$ . In addition, high level of low density lipoprotein cholesterol (1.118,21.241)  $P = 0.035$  with adjusted odds ratio of 4.87 at 95% confidence interval variables were significantly associated with poor lifestyle modification practice.*

***Conclusion and recommendation:** Lifestyle modification practice was relatively moderate in the study participants attending the study setting. Encouraging patients on the adherence to weight management, physical activity, maintaining normal level of Low density Lipoprotein cholesterol and Fasting Blood Sugar were highly recommended for patients with hypertension.*

**Keywords:** Hypertension, lifestyle modification, practice, SNNPR, WSUTRH.

# REFERRAL SERVICE UTILIZATION AND ASSOCIATED FACTORS IN WOLAITA SODO UNIVERSITY TEACHING REFERRAL HOSPITAL, SOUTHERN ETHIOPIA

BY: MULUGETA WOLDEMICHAEL BEKALO (BSC. MPH)

MAJOR ADVISOR: TAKELE TADESSE (BSC, MPH, PH.D., PROFESSOR OF  
EPIDEMIOLOGY & PUBLIC HEALTH)

CO-ADVISOR: TADELE DANA (BSC, MPH/RH, ASSISTANT PROFESSOR)

## ABSTRACT

**Background:** In spite of the endeavors made by the Ethiopian government to progress the referral service utilization, the overall magnitude of referral service utilization is poor and having many challenges in usage of referral service for health care to be proceeded over time at distinctive health referral service delivery tires.

**Objective;** the main objective of the current study was to describe referral service utilization and associated factors in Wolaita Sodo University teaching and Referral Hospital, Southern Ethiopia.

**Methods** A facility based cross sectional study using both quantitative and qualitative data collection methods were employed. A sample size of 660 study participants planned was involved. The sampling techniques of the study were simple random sampling for the quantitative approach, whereas purposive sampling of case studies to explain organizational experience. Criterion sampling technique was conducted. Data was entered and cleaned using the Epi-data software and exported to statistical Package for the Social Sciences [SPSS] Version 20.

Those variables with  $P$ -value  $<0.25$  in bivariate analysis was taken in to multi-variable logistic regression analysis and  $P$ -value  $<0.05$  was considered as statistically significant, AOR, and the 95% Confidence Interval was reported accordingly and presented by tables and figures.

### Result

A total sample of 660 participants were planned to be enrolled in this study among which 648 individuals participated in the study with response rate (98.2%). From the study participants (60.9%) were Female, and the mean  $\pm$ SD age of subjects was  $36.88 \pm 10.6$  years old. The overall magnitude of referral service utilization was 36.2% during the study period. Among several predicting factors public health facility initiate for referral service (47.7%) (AOR 0.449, 95%CI 0.270-0.747), No free ambulance transport provided to clients (86.3%) (AOR 0.425, 95% CI 0.217-0.834) and majority participants 348(62.9%), AOR (5.742) 95% CI (3.418-9.646) were affected by denial of warm and welcoming reception. Due to these facts 269 (48.6%) AOR (5.213) 95% CI (3.079-8.828) of clients responded that their intended reason of referral need was not met.

**Conclusion** Self-initiation of referral service, absence of free ambulance service, denial of warm welcoming at reception and reason for referral service not met were predicting factors for the service not to in line with the national referral service standards. Thus, strengthening of referral service network and enforcement of national referral service guideline and standards has to be in practice so as to improve the service delivery.

**Keywords** Referral service utilization, Referral hospital, primary health care units, referring units and receiving unit

**RISK PERCEPTION OF HIV INFECTION AND ASSOCIATED FACTORS AMONG  
UNDERGRADUATE REGULAR PROGRAM STUDENTS IN WOLAITASODO  
UNIVERSITY, ETHIOPIA**

**BY: TEKACHEW WANA**

**MAJOR ADVISOR: AMENE ABEBE (MPH, ASSISTANT PROFESSOR)**

**CO-ADVISOR: SHEMSU NURIYE (MPH)**

**ABSTRACT**

**Background:** Major proportions of the population, particularly the undergraduate University students, are at high risk of HIV infection despite a high level of knowledge about HIV/AIDS.

**Objective:** To assess the risk perception of HIV infection and associated factors among undergraduate regular students of Wolaita Sodo University.

**Methods:** A mixed method cross-sectional study was conducted from April to May 2019. A multistage sampling technique was used to select 863 students. A structured and self-administered questionnaire was used to collect quantitative data. Descriptive statistics, bivariate and multivariable logistic regression were used. The odds ratio was used to check the strength of the association of dependent and independent variables along with its 95% CI. Qualitative data were collected from 15 purposively selected participants. Qualitative data were collected by face-to-face interview. The data were analyzed using thematic analysis. The findings were presented by detailed textual descriptions of the themes that were conducted in the respective headings.

**Result:** The overall response rate in this study was 95.5%. From the total participants 60.8% were males and the rest were females. More than half (54.5%) of the participants ever had sex in their lifetime. From the total participants 472(57.1%) did not perceive themselves as at risk of contracting HIV infection. Marital status (AOR= 3.80, 95% CI = 1.05, 13.720), peer influence (AOR= 1.60, &CI [95%] = [1.20, 2.137]), risky sexual practice (AOR= 1.21, CI [95%] = [0.99, 1.19]), and knowledge(AOR=0.71, CI [95%] = [0.53, 0.95]) were independent predictors of HIV risk perception in the multivariate analysis.

**Conclusion and recommendations:** More than half of (57.1%) of the students who had a low perception of HIV infection. Risky sexual practices, less knowledge regarding HIV infection, peer influence, marital status were the predictors of perception of HIV infection. Enhancing HIV risk perception by designing and implementing behavioral change interventions is recommended.

**Keywords:** risk perception, HIV infection, undergraduate students, Ethiopia

**Masters in Human Nutrition**

**VITAMIN A DEFICIENCY AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN  
IN SODO TOWN, SOUTHERN ETHIOPIA**

**BY: EYERUSALEM ENDRIAS TOMA**

**MAJOR ADVISOR: DR. ELAZAR TADESSE (RN, MSC, PHD)**

**MR. SAMSON KASTRO**

**ABSTRACT**

**Background:** Vitamin A deficiency during pregnancy causes maternal anemia and lowers hemoglobin level of newborns at birth. There is the paucity of evidence in Vitamin A deficiency among pregnant women in Ethiopia. Therefore, this study aimed to determine the level of vitamin A deficiency and associated factors among pregnant women.

**Methods:** A community- based cross-sectional study was conducted in Sodo Town, Southern Ethiopia from May-July 2019. A total of 422 pregnant women were selected using simple random sampling technique. Serum retinol concentration was determined by standard procedures using High - Performance Liquid Chromatography. Data were entered into Epi Data version 3.5.1 and exported into SPSS version 20 to analysis. Binary logistic regression analyses were done and crude and adjusted Odds Ratio with 95% confidence intervals (CI) was reported.

**Results:** The prevalence of vitamin A deficiency among pregnant women was 21.8 %. Women who attended secondary education were 4.54 (AOR: 4.54; 95% CI: 2.15-9.81) times more likely to have VAD compared with those who attended beyond secondary school. Women from a household size of five or more people were 3.18(AOR= 3.18; 95 CI: 1.52-6.02) times more likely to have vitamin A deficiency compared to their counterparts. Women with the lowest wealth index were 2.96(AOR= 2.96; 95% CI: 1.06-8.24) times more likely to have vitamin A deficiency compared with those who had highest wealth index. Women who consumed four and below four food groups were 3.09 (AOR= 3.09; 95 CI: 1.59-6.02) times more likely to have vitamin A deficiency compared with those who consumed more than four food groups. Women in the third trimester pregnancy were 3.10 (AOR= 3.10; 95% CI: 1.43-6.72) times at higher odds of having vitamin A deficiency compared with women with the first trimester. Women who had a birth interval below 36 months were 2.55 (AOR= 2.55; 95% CI: 1.27-5.13) times more likely to have vitamin A deficiency compared with those who had women who had a birth interval above 24 months.

**Conclusions:** The prevalence of vitamin A deficiency among pregnant women in the study area was severe public health problem. The significant predictors of vitamin A deficiency were advanced gestational age, education, lowest socio economic status, large family size, poor dietary diversity and short birth interval. So different stakeholders focus in this problem and give attention for this risk groups and the above risk factors to decrease the problem.

**GROWTH MONITORING AND PROMOTION SERVICE USE AND ASSOCIATED  
FACTORS AMONG UNDER TWO CHILDREN IN DAMOT GALE DISTRICT, WOLAYTA  
ZONE, SOUTH ETHIOPIA**

**BY: HANNA ABEBE  
ADVISORS: DR. TSEGAYE DEMISIE (PHD)  
MR. DEREJE YOHANNES (MSC IN HN)**

**ABSTRACT**

**Background:** *Growth Monitoring and Promotion is a prevention activity comprised of growth monitoring linked with promotion (usually counseling) that increases awareness about child growth and improves caring practices. Recently questions have been raised as to whether growth monitoring is not being implemented as it was intended to be. However, little research has been done to assess the utilization of the service. So this study aimed at determining the magnitude of GMP utilization and factors associated with it in Damot Gale District , Wolita Zone.*

**Objective:** *To assess utilization of growth monitoring and promotion and, identify factors associated with it among under two years old children in Damot Gale District, Wolita Zone, South Ethiopia.*

**Methods:** *A community based cross sectional study was conducted from April 9 to June 7, 2019. A total of 452 were randomly selected child mother pair from the community of Damot Gale District participated in the study. Data were collected using structured questionnaire through interview. The magnitude of GMP chart utilization was determined by observation of chart and multivariate logistic regression model was fitted using SPSS for windows version 23 to identify factors associated with of GMP service.*

**Result:** *Overall utilization of GMP in Damot Gale District was 13.7%. Maternal primary and secondary education (AOR=2.55; 95% CI: 1.11, 6.07 and AOR=4.38; 95% CI: 1.88, 10.12), respectively, age of the child AOR=2.45, 95% CI: 1.12,5.73) and availability of nutritional education AOR=2.36 (1.18,4.74) were found to be significantly associated with utilization of GMP.*

**Recommendation and Conclusion:** *Utilization of GMP services was low. Health care providers should strengthen nutritional counseling and give information on the barriers of GMP service utilization like by avoiding the missed opportunities of GMP for every child coming to the health care facility.*

**Key words:** GMP, Health extension worker, use, Damot Gale District

**COMPLIANCE AND ASSOCIATED FACTORS TO IRON FOLIATE  
SUPPLEMENTATION IN PREGNANT WOMEN ATTENDING ANTENATAL CARE  
IN BOLOSO SORE DISTRICT, SOUTHERN ETHIOPIA**

**BY: MEKONNEN TONA (BSC)**

**MAJOR ADVISORS: WONDIMAGEGN KUMA (MPH, ASSI.PROF,PHD  
CANDIDATE)**

**CO-ADVISORS: DR.GARGI DHAR (MSC,MPHPH)**

**ABSTRACT**

**Background:** *A pregnant woman is said to be anemic if her hemoglobin concentration during the first and third trimester of pregnancy is lower than 11g/dl, at sea level. When anemia is caused by a decreased level of iron, it is said to be iron deficiency anemia. The most common method to prevent iron deficiency anemia in pregnancy is providing oral iron supplementation during pregnancy.*

**Objective:** *To assess the compliance status of Iron foliate supplementation among pregnant women attending Antenatal Care.*

**Methodology:** *The study was conducted started from October to December 2019 in Boloso Sore district, Southern Ethiopia. It was done by using institution based cross sectional study design and quantitative method .Among sample of 604 pregnant women who received iron foliate for at least for one month, 592 women with response rate of 98% were involved in the study. Data was collected by using structured questionnaire. After entering in epi-data version 3.5.1, data was exported and analyzed with SPSS version 21.Bivariate and multivariate logistic regression analyses were employed to identify factors associated with compliance with iron-folate supplement.*

**Result:** *Among 592 pregnant women included in the study, the compliance level of IFAS was 239 (40.4%).Educational status of mother (AOR=7.69, 95% CI: 2.97, 19.95), Counseling about the supplement (AOR=5.30 (95% CI: 3.04, 9.22) and knowledge about IFAS (AOR=4.04 (95% CI: 2.28, 7.18) were found to be factors associated with compliance to iron foliate supplement.*

**Conclusion and Recommendation:** *The study showed as compliance level to IFASis low. So that increasing knowledge of women about the benefit of iron foliate and risks of anemia in pregnancy through counseling and promotion of women education increases compliance.*

**Key Words:** Compliance, Iron foliate and Pregnant Women

# PREVALENCE OF ZINC DEFICIENCY AND ASSOCIATED FACTORS AMONG SCHOOL AGE CHILDREN IN WOLAITA SODO TOWN, SOUTHERN ETHIOPIA

BY: MARIYA MADA GAJE

MAJOR ADVISOR: DR. ELAZAR TADESE (PH.D.)

CO-ADVISOR: DR. GARG DHAR (PH.D.)

## ABSTRACT

**Background:** Zinc is one of the trace elements important in human nutrition and metabolism. Zinc deficiency is a major public health problem in many developing countries. Forty five percent of the world population lives with zinc deficiency. It has been linked with reduced growth and development in children. However, this problem has not been assessed, especially in study area.

**Objective:** this study was to determine the prevalence and factors associated with zinc deficiency in school age children of Walaita Sodo Town, Southern Ethiopia.

**Methods:** A community-based cross-sectional study was conducted in Wolaita Sodo Town from May 1-June 30, 2019. Seven out of 24 kebeles were randomly selected from Wolaita Sodo Town. Households with 6-12 years old children were taken from selected kebele administrations. A total of 277 school age children were selected using systematic sampling technique. Data were gathered using a structured questionnaire, anthropometric measurements were taken and biochemical analysis was done after obtaining a written consent and assent. Some 3-5ml venous blood was collected. The concentration of zinc in serum was measured by atomic absorption spectrometry. Logistic regression was used for statistical analysis and the results were presented using adjusted odds ratio (AOR) with 95% confidence intervals. A p-value <0.05 was taken as statistically significant.

**Results:** Two hundred seventeen children were included in the study with a response rate of 97.4%. The mean ( $\pm$ SD) age of children was 9.27(2.0) years. The overall prevalence of zinc deficiency was 31.1%(95%CI:25.2-37). The prevalence of zinc deficiency was 32.1%(95%CI:41.1-53.3) in girls and 67.9%(95%CI:46.7-58.9) in boys. Age of children [AOR=4.34, 95%CI:1.37-13.6] [DDS=AOR=7.61, 95%CI:2.18-26.49], wealth index [AOR=13.1, 95%CI:2.82-23.6], and Sex of children [AOR=3.67, 95%CI:3.678-9.856], were significantly associated with zinc deficiency.

**Conclusion:** The prevalence of zinc deficiency was high in the study population. This may be due to low diversified diet, low socio-economic status, and sex and age of children. The findings will help to populate data for the implementation of dietary diversified diet and consumption and fortification of zinc rich food.

Key words: zinc deficiency, school age children, prevalence and sodo town.

**PATIENT SATISFACTION WITH REGULAR HOSPITAL MEAL SERVICE AND  
ASSOCIATED FACTORS AMONG ADULT IN-PATIENTS IN THREE HOSPITALS  
WOLAITA ZONE, SOUTHERN ETHIOPIA**

**BY: MESKEREM TEKA (BSC)**

**MAJOR ADVISOR: GARGI DIHAR (PHD, ASSOCIATE PROFESSOR)**

**CO-ADVISOR: TADELE DANA (BSC, MPM/RH, ASSISTANT PROF)**

**ABSTRACT**

**Background:** *Patient satisfaction with hospital food service is one of the measure by which the quality of health care services is evaluated. Food services in hospital is one of the essential parts of the healthcare management of patients. However there is a scarcity of evidence on patient satisfaction and factor associated with regular hospital meal service in the study area. The aim of this study was to assess patient satisfaction with regular hospital food service and associated factors among adult in-patient.*

**Methods:** *Hospital-based cross-sectional study was conducted. A total of 423 patients admitted in Wolaita Sodo University teaching referral hospital Otona, general Christian hospital and Dubo hospital. The study population was further allocated to each of the selected hospitals proportional to the size of their admitted patients. Data were collected using pre-tested and structured questionnaires. Data were checked coded and entered in to EPI DATA 3.1 and exported to SPSS V.25 for data cleaning and analysis. Frequencies and percentage of the different variables were computed and bivariate analysis was done and P Value < 0.25, variables was candidate for the multivariable analysis. P-value <=0.05 in multivariable analysis was considered as statistical significance.*

**Result:** *Among the total participants 33.6% of patients were satisfied with regular hospital food services. In the multivariable logistic regression analysis, residence of respondent [AOR=2.16, 95% CI (1.282-3.629)], monthly income of patient, [AOR=2.64, 95% CI (2.395-13.284)], flavour of meal, [AOR=5, 95% CI (1.928-13.397)], provision of fresh water with food [AOR=8.63, 95%8.626 CI (1.339-55.6)] and provision of easily chewable food (AOR=7.49, 95%CI(1.99-28.23) were statistically significantly associated with the dependet variable.*

**Conclusion:** *This research ascertained that residence of patients, monthly income of patient, flavour of meal, provision of fresh water with food and provision of easily chewable food were significantly associated with patient satisfaction with regular hospital meal service. Thus, there should be an integration of the concerned body of hospitals for the implementation of different intervention to solve these.*

**Keyword:** Patient satisfaction, Hospital meal service, Adult In-patient

# PREVALANCE OF IRON DEFICIENCY ANEMIA AND ASSOCIATED FACTORS AMONG 6-59 MONTH CHILDREN IN WOLAITA SODO TOWN, SOUTHERN ETHIOPIA

BY: ELSHADAY DIRIBA AYANA

MAJOR ADVISOR: DRTSEGAYEDEMSE (PHD)

## ABSTRACT

**Background:** - IDA is a risk factor for death resulting in about 726,000 deaths in the perinatal and childhood periods with the greatest toll in South East Asia and Africa. Children 6-59 are at higher risk of iron deficiency anemia, mainly because their increased needs for iron may not be met by their diets. There is no study that documented the prevalence of iron deficiency anemia among 6-59 month children and associated factors in the study area.

**Objective:** -To assess iron deficiency anemia and associated factors among children 6-59 months.

**Methods:**-community based cross sectional study was carried out among 2316-59 month children who live in Sodo Town from May-June 2019. Seven Kebeles were randomly selected from Wolaita Sodo Town. Systematic sampling technique was used to select study participants. Data collection was carried out using structured, pre-tested interviewer administered questionnaire. About 3 ml venous blood from arm was collected from children for bio-chemical analysis to measure, hemoglobin level and serum ferritin. IDA was defined as having hemoglobin levels of  $<110$  g/dL and ferritin levels of  $<30$   $\mu$ g/L. Data were entered into EPI data version 3.5.2 and exported to SPSS version 21.0 for further analysis. P-value  $< 0.05$  was considered as having statistical association with iron deficiency anemia. Odds ratio and 95% CI were used to measure the strength of association. Ethical approval was obtained from the ethical review committee of school of public health in Wolaita Sodo University.

**Result:**The prevalence of IDA was 78(33.8%). Children aged 6-11 months were (AOR=7, 95%CI=1.53-2.9), Children from a families with lowest wealth index were (AOR=8.3, 95%CI=1.7-4.77), child history of diarrhea two weeks prior to data collection (AOR=2.45, 95%CI=1.11-3.5), child had poor dietary diversity score (AOR=5, 95%CI=2.13-11.76) and flesh food consumption (AOR=3.64, 95%CI=1.4-9.5) were significantly associated with IDA.

**Conclusion:** Prevalence of Iron deficiency anemia among 6-59 month children was a moderate public health problem in the study area. Most important predictors are age of the child, wealth index, child history of diarrhea, minimum dietary diversity score and flesh food consumption. Focused policies and strategies towards the above factors should be designed to reduce iron deficiency anemia among 6-59 month children.

**PRENATAL DEPRESSION AND ITS ASSOCIATION WITH HOUSEHOLD FOOD  
INSECURITY IN RURAL BOLOSO SORE DISTRICT IN SOUTH ETHIOPIA**

**BY: TIZITATEKLE (BSC)**

**ADVISORS: BEREKET YOHANNES (MPH, PH.D. FELLOW)**

**FEKADU ELIAS (BSC, MPH)**

**ABSTRACT**

**Background:** Maternal depression is becoming a public health challenge in Ethiopia, particularly more commonly during pregnancy. These days, some pocket studies associate livelihood challenges such as food insecurity with maternal depressive symptoms. However, there is a lack of adequate evidence on the prevalence of maternal depression and its association with household food insecurity in a chronically food-insecure area in Ethiopia.

**Objective:** The objective of this study was to assess prenatal depression and its association with household food insecurity in rural Boloso Sore District in Southwest Ethiopia.

**Method:** Community based cross-sectional study was conducted involving 480 pregnant women in eight selected rural kebeles of Boloso Sore district, South Ethiopia from April to June 2019. Sample size was calculated by a single population proportion formula using OpenEpi303 and proportionally allocated for the number of pregnant women in the selected kebeles. Each study participant was selected by computer generated simple random sampling method. Depression was assessed by PHQ 9 and household food insecurity was measured by using the Household Food Insecurity Access Scale. Data were entered by using EpiData 3.02 and exported to Stata 15 for data cleaning and analysis. Descriptive statistics were used to summarize the data. An ordinal logistic regression model was applied to examine the association between the outcome and exposure variables controlling for potential confounders.  $P < 0.05$  was used to determine the cut-off points for statistical significance.

**Result:** Data was obtained from 478 women, a response rate of 99.6%. The overall prevalence of prenatal depression was 47.9% [95% CI (44.4, 53.4)]. Out of this 140 (29.3%), 58 (12.1%), 31 (6.5%), had mild, moderate and severe depression respectively. The overall prevalence of food insecurity was 95.4%. Unmarried [AOR 95% CI (2.92 (1.35, 6.32))], Severe food insecurity [AOR 95% CI 4.85 (1.4, 10.3)], Harassment from partner/husband [AOR 95% CI (9.38 (5.2, 14.2))], planning of pregnancy [AOR 95% CI (0.44 CI : (0.25, 0.78))] and lowest wealth index level [AOR 95% CI 5.2 (1.5, 9.73)] were associated with higher category of prenatal depression.

**Conclusion and Recommendation:** Since the risk for prenatal depression is huge in the study area, there was a need for screening for prenatal depression as a routine antenatal checkup and attention should be given for those in higher risk of developing higher category depression.

**Keywords:** Food insecurity, prenatal depression, pregnant women, Ethiopia

# DIETARY CALCIUM INTAKE AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN IN LOMA DISTRICT, DAWURO ZONE, SOUTH WEST ETHIOPIA

BY: ADISU HAILU TOFU

MR YIBELTAL KASSA (ASST. PROFESSOR)

## ABSTRACT

**Background:** Low dietary calcium intakes could cause harmful effects to the pregnant woman by influencing pregnancy outcome. Adequate intake of dietary calcium during pregnancy reduces the risk of complications and aids in improved birth outcome. Many researchers focus on urban areas to address the issue and our study were focused on rural community. Hence the study is aimed at assessing dietary calcium intake in rural communities.

**Objective:** To assess the dietary calcium intakes and associated factors among pregnant women in Loma, south west Ethiopia from May to July, 2019.

**Methods:** - A community based cross-sectional study was conducted in Loma, Dawuro Zone, and Southwest Ethiopia. Data were collected from 398 pregnant women after random selection from nine kebeles. Simple random sampling technique was employed to select study subjects. Socio-economic and demographic, and health related data was collected using structured, interviewer administered, and pre tested questionnaire. The 24hr dietary recall was used for three different days with seven days interval as per the recommendation. When dietary data is collected, often it was converted into nutrients, especially the calcium intake by using Ethiopian food composition table. Collected data was checked for completeness, and entered in to Epi Data version 3.02 for data clearance and exported to SPSS version 20 for analysis. Crude and adjusted Odds Ratios with 95% confidence level results of multivariate logistic regression was used to assess the statistical significance of associations between independent and dependent variables. The level of statistical significance was declared at  $p < 0.05$ .

**Result:** The median calcium intake was 543mg per day. From 398 participants, 265(66.6%) were at risk of inadequate intake of calcium. The finding of this study identified that nutritional counseling have strong statistical association with dietary calcium intake of mothers during pregnancy. The chance of dietary calcium intakes during pregnancy who were received nutritional counseling 2.4 times higher than those who were not received nutritional counseling (AOR=2.432 95% CI: 1.072-5.517). Women who were being civil servants (AOR 0.052 95% CI 0.01-0.269) were less likely to have calcium intakes than farmers. Women with those whose household size is less than four were significantly less likely to have higher calcium intakes compared to household size is greater than four(AOR 0.285 95% CI 0.111- 0.733).

**Conclusion and recommendation:** From the present study, it was concluded that, majority of pregnant mothers 265(66.6%) had a poor dietary calcium intakes during their pregnancy. It was recommended that consumption of enough calcium and dairy products should be included and emphasized in the nutrition education component of maternal health programs.

**Key words:** Dietary calcium intake, pregnant women, Loma district

# COMPARATIVE STUDY ON UNDER NUTRITION AND ASSOCIATED FACTORS AMONG 2-5 YEARS OLD CHILDREN OF EMPLOYED AND UNEMPLOYED WOMEN IN URBAN WOLAITA, SOUTHERN, ETHIOPIA

BY: DERARTU ZEWDU

MAJOR ADVISER: YOSEPH HALALA (ASS. PROF, PHD STUDENT)

CO-ADVISER: DR. THILAGAVATHI THANGAVEL (PHD

## ABSTRACT

### **Background:**

*Many child deaths result from under nutrition globally. Over half of total childhood deaths in developing countries, can be attributed to just mild and moderate under nutrition. As female participation in the labor market has been rising globally, a growing interest has emerged to explore whether maternal employment is contributing towards better child health.*

**Objective:** *This study intended to assess Under nutrition and associated factor among 2-5 years old children of employed and Unemployed women in Wolaita zone, administrative towns.*

**Methods:** *Community based comparative cross-sectional study design was conducted among randomly selected 317employed and 317unemployed women having preschool children in wolaita zone towns from May 22 - June 27, 2019. bivariate logistic regression was done to assess the association between independent and dependent variables. Model fitness was checked by doing Hosmer and Lemshow test. Variables which shown association ( $p$  value  $\leq 0.25$ ) in the bivariate analysis were included in the final multivariable logistic regression model. Odds ratios for logistic regression along with 95% confidence interval was estimated. A table having crude and adjusted Odds ratio as well as 95% confidence intervals was constructed along with the corresponding p-value. P-value less than 0.05 were declared as level of statistical significance.*

**Result:** *The magnitude of stunting among children of employed and unemployed women were found to be 18.5% and 26.5% respectively. With regard to the level of wasting among the study participants, 5(1.7%) and 8(2.6%) of children of employed and unemployed mother respectively were classified as wasting based on the result of anthropometric measurement. similarly about 4.6 % and 8.3 % of pre-school children of employed and unemployed mothers were underweight respectively.*

**Conclusion and recommendation:** *The prevalence of stunting, wasting and underweight was lower among children of employed mother compared with unemployed women. Educating and empowering women was one of the area needs great intervention by concerned stakeholders for better maternal and child nutritional status.*

**Key words:** Employed Women, Stunting, Wasting, underweight, Southern Ethiopia.

# ADHERENCE TO IRON AND FOLIC ACID SUPPLEMENTATION AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE IN KINDO KOYSHA DISTRICT, SOUTHERN ETHIOPIA

BY: DILNESAW AYCHEW

ADVISORS: DR.TSEGAYE DEMISSIE (PH.D.) AND  
DEREJE YOHANNES (BSC, MSC IN HUMAN NUTRITION)

## ABSTRACT

**Background:** Adherence to iron and folic acid among pregnant women attending antenatal care is very crucial in order to prevent and treat iron deficiency anemia occurring in pregnant women related to pregnancy. In order to prevent anemia related to pregnancy WHO recommends daily iron and folic acid supplementation for pregnant women.

**Objective:** To measure adherence to iron and folic acid supplementation and associated factors among pregnant women attending antenatal care in Kindo koysha District, Southern Ethiopia, from May 1 to 30, 2019.

**Methods:** Community based cross-sectional study was conducted among pregnant women attending ANC in Kindokoysha district. There were 712 pregnant women enrolled in the study. Systematic random sampling method was used to select participants. Data were collected by using an interviewer-administered questionnaire through face to face interview. The collected data was cleaned and entered by using Epi Data 3.1 and analyzed using SPSS version 20 Software. Binary and multivariable logistic regression was used for analysis. Descriptive statistics were used to describe the study variables. Variables with  $p < 0.05$  were considered as statistically significant.

**Result:** Among 712 respondents, 82(11.5%) at 95% CI (8.9-15.1) were adherent to iron and folic acid supplement by pill count measurement of adherence. Maternal education (AOR=2.772, 95% CI =1.144, 6.717), maternal occupation(AOR=2.356, 95% CI =1.040, 5.340), Having at least >4 antenatal visits (AOR= 3.408, 95% CI =1.609, 7.211), Having counseling on benefits of iron and folic acid supplements (AOR= 3.996, 95% CI = 1.654, 9.659), Family size (AOR=2.102, 95% CI=1.042, 4.242), Knowledge on benefits of supplements AOR= 3.663, 95% CI = 1.729, 7.760) and Developed Side effect (AOR= .199, 95% CI = .084, .473) were found to be statistically significant association to adherence to iron and folic acid intake among pregnant women.

**Conclusion:** Adherence to iron and folic acid intake in this study was found to be low in the study area. Maternal education, Maternal occupation, Attending at least >4 antenatal visits, Family size, Having counseling on benefits of iron and folic acid supplement and Knowledge on benefits of iron and folic acid supplements were found to be positively associated whereas developing side effect is found to be negatively associated. Awareness creation towards utilization of antenatal care, provision of routine counseling on benefits of supplement during antenatal care to improve the knowledge of pregnant women are recommended to improve adherence to supplement intake among pregnant women attending antenatal care.

**Keywords:** Adherence, Pregnancy, Measurement of adherence

**DIETARY DIVERSITY AND ASSOCIATED FACTORS AMONG PREGNANT  
WOMEN IN RURAL SHEBEDINO DISTRICT, SIDAMA ZONE SOUTH  
ETHIOPIA**

**BY: GETAHUN KELEMU (BSC)**

**MAJOR ADVISOR: TSEGAYE DEMISSE (PHD)**

**CO ADVISOR: DEREJE YOHANNES (MSC)**

**ABSTRACT**

**Back ground:** *Dietary diversity is among the core indicators to assess pregnant women quality nutrient intake. However, meeting minimum standards of dietary diversity of pregnant women is challenging in many developing countries including Ethiopia. Information concerning the level of dietary diversity and associated factors among pregnant women in Ethiopia, especially in study area is limited.*

**Objective:** *The objective of the study was to assess the prevalence of dietary diversity and associated factors among pregnant women in rural community of Shebednio District, Sidama Zone, and SNNPR Ethiopia.*

**Method:** *Community based cross sectional study was conducted from January 1<sup>st</sup> to February 1<sup>st</sup>, 2019. Multistage sampling technique was used to select 570 pregnant women. Data was collected by trained data collectors using structured questioners. Dietary diversity score measured by using Minimum Dietary Diversity Score of women by using FAO guideline. Data were entered, cleaned and coded by using EPI-info v.7.1 software and analyzed by SPSS version 22 statistical software. Bivariate and multivariate logistic regression was used to determine the association between dependent and independent variables. AOR and 95% CI were used to determine degree and direction of association. Statistical significance was declared at  $p$ -value  $< 0.05$ .*

**Results:** *This study revealed that level of Minimum dietary diversity of women was 28.9% (95% CI 25.3, 32.6). Multivariable analysis showed that small family size (AOR=3.877, 95% CI 1.298, 11.574), practicing backyard garden (AOR=2.013 95% CI 1.119, 3.620) and Nutrition information during ANC (AOR=1.926 95% CI 1.126, 3.294) were significantly associated with dietary diversity of pregnant women.*

**Conclusion:** *Minimum dietary diversity among pregnant women in the district low. Family size, practicing backyard garden and nutrition information on dietary diversity during Antenatal care was significantly associated with dietary diversity. Therefore, attention should be paid to improve dietary diversity practice of pregnant women.*

**Key terms:** Dietary diversity, dietary diversity score, 24-hour recall, pregnant women and Shebednio

# CHALLENGES TO NUTRITION MANAGEMENT AMONG PATIENTS ON ANTIRETROVIRAL THERAPY IN PRIMARY HEALTH CENTERS' IN ADDIS ABABA; A PHENOMENOLOGICAL STUDY

BY: HELEN ALI (BSC)

ADVISOR: KASSA DAKA (PHD, ASSOCIATE PROFESSOR)

CO-ADVISOR: BEFEKADU BEKELE (MPH)

## ABSTRACT

**Introduction:** *Nutritional management is a fundamental practice to the concern of all patients infected with human immunodeficiency infection (HIV). The nature of HIV/AIDS disease and malnutrition impacts are interlocked, intensify one another in a limitless manner, and cause substantial burden to the insusceptible system framework unconventionally.*

**Objective of the study:** *This study aimed to explore challenges in nutrition management among people living with HIV on antiretroviral therapy (ART) in three health care services centers in Addis Ababa, Ethiopia. Specifically, to describe lived experience of patients while managing their nutrition.*

**Methods and Materials:** *- A hermeneutic (interpretive) phenomenological study design was used. The study used an in-depth semi-structured interviews to describe a lived experiences among adult patients aged 18 and above and participants were directly selected purposively until saturation of idea reached. Scientific rigor and trustworthiness like credibility, transferability, dependability and conformability were secured in each respective steps. Verbatim transcription followed by translation and re-reading of the data have been secured to immerse to the data. The data has been analyzed through inductive thematic analysis assisted by NVIVO version 12 pro software. All the analysis steps were systematically followed.*

**Result:** *- A total of 28 patients on ART were interviewed. Accordingly, nutrition management challenges for HIV patients were described using six major themes. The themes have explained how patients on ART have been challenged to manage their nutrition since their diagnosis by exploring their lived experience. The major themes were acceptance of disease and the health status, facilitators and barriers of treatment adherence, behavioral changes in eating pattern, and experience of food security issues, Nutrition knowledge and support. Among these, food security issue among ART patients has been found to be the leading major theme for other themes.*

**Conclusion and recommendation:** *-Taken together this research found that there was a huge challenge beyond taking medications among patients on ART. There should be a need to increase food security issue and various approaches in different hierarchy of implementation.*

**Key word:** - Nutrition management, HIV, ART, phenomenolog

**VITAMIN A UTILIZATION STATUS AND ASSOCIATED FACTORS OF CHILDREN  
AGED (6-59) MONTH IN HUMBO TOWN ADMINISTRATION, WOLAITA ZONE,  
SOUTHERN ETHIOPIA**

**BY: MATUSAL EYANA  
ADVISOR: DR.GARGI DHAR (PH.D.)**

**ABSTRACT**

**Background:** *Vitamin A is an essential nutrient which is needed in a small amount for human being. It is particularly important for normal functioning of the visual system, of epithelial cells, immune function and reproduction. Infants and children require more vitamin A to grow faster and enable them to prevent infections.*

**Objective:** *To assess Vitamin A utilization status and associated factors among children of aged (6-59) month in humbo town administration, southern Ethiopia.*

**Methods:** *Community-based cross-sectional study was conducted to assess vitamin A utilization status and associated factors among children aged 6-59 month in humbo town administration, southern Ethiopia. After data collection, it was checked for completeness and consistency before data entry. Data were coded and interred into EpiDat version 3.01 and exported to Statistical package for the social sciences (SPSS) version 20 for further analysis. Bivariate and multivariable logistic regression models were used to assess the association between the independent variable with vitamin A utilization. The data were cleaned using SPSS by running frequency and descriptive statistics.*

**Result:** *A total of from 523 about 511 participants were included with a response rate of 97.7 %. Among caregivers of the children 93.2% was biological mothers and 6.8% were other than biological mothers. This study as shown that vitamin A utilization status of humbo town administration of 6-59 month children was 70.1%. This study shows that maternal education has statically significant variable with vitamin A utilization status AOR= [3.57(1.3-9.84)]. This study revealed that paternal education has statically significant variable with vitamin A utilization status AOR=[3.6(1.3-10)], [3.72(1.5-9.3)], [3.87(1.5-10)] when comparing educational status of odds of primary completed, secondary completed and more than secondary educated with illiterate. This study as shown that measles vaccination has statically significant with vitamin A utilization status AOR= [3.7(1.9-7.2)].*

**Conclusion:** *Based on this study, we concluded that vitamin A utilization status was still low when compared with regional coverage; this study confirmed that level of maternal, paternal education and measles vaccination were significantly associated factors with vitamin A utilization status in the study area.*

**Keywords:** vitamin A Utilization status, 6-59 months children, humbo town administration, SNNPR, Ethiopia.

**NUTRITIONAL STATUS AND ITS ASSOCIATION WITH ACADEMIC PERFORMANCE  
AMONG SECONDARY AND PREPARATORY SCHOOL ADOLESCENT IN WOLAITA  
SODO TOWN, SOUTH ETHIOPIA, 2019**

**BY: SELAMAWIT W/YOHANNES KATISO (BSC)**

**MAJOR ADVISOR: THILAGAVATHI THANGAVEL (PHD)**

**CO-ADVISOR: SAMSON KASTRO (MSC)**

**ABSTRACT**

**Background:** Academic achievement of school adolescent can be affected by several factors among them nutritional status is the major one. Though evidence about the magnitude of malnutrition is well established in Ethiopia, there is a scarcity of evidence about the association of nutritional status with academic performance among the school adolescent.

**Objective:** To determine the association of nutritional status with academic performance among adolescents attending secondary and preparatory schools in Wolaita Sodo town, Southern Ethiopia.

**Methods:** A facility based cross-sectional study was conducted among adolescents in secondary and preparatory schools of Wolaita Sodo town from April to June 2019. Six hundred seventy study participants were selected by systematic sampling. The academic performance of the adolescents was measured by average mark score of two consecutive semester's result of the overall subjects. Data were entered into EPI DATA version 3.1 and exported to STATA software Version 15 for analysis. Descriptive statistics, Pearson Correlation, linear regression were used in the statistical analysis and  $p$ -value  $< 0.05$  was considered as significant.

**Results:** the mean academic performance of students was  $69.21 \pm 0.42$  (95% CI: 68.34%-70.02%). A unit increase in BAZ increases an average mark score of students by 1.886 ( $\beta=1.886$ ; 95 %CI: 1.137 \_2.635) and A unit increase in HAZ increases an average mark score of students by 1.478 ( $\beta=1.478$ ; 95%CI: 0.719\_2.236). Being female decrease an average score of academic performance by 2.627 ( $\beta=-2.627$ ; 95 %CI: -4.278\_-0.981). An average mark score of students from separated parents decreases by 4.733 ( $\beta=-4.733$ ; 95 %CI: -6.731 \_ -2.735). An average mark score of students from Wealth index first class decreases by 9.915(-9.915; 95 %CI: -12.787\_ -7.044) as compared with students from highest wealth class. Learning in private school increase an average score of student's by 4.184 ( $\beta=4.184$ ; 95 %CI: 2.464 \_ 5.904).

**Conclusion:** This research ascertained that, nutritional status: BAZ and HAZ, type of schools, house hold wealth status, sex, and marital status were significantly associated with the academic performance of the adolescent students. Thus, there should be integration of concerned sectors for implementation of different intervention to solve these problems.

**Key Terms:** Academic performance, school adolescent, Nutritional status

## **MPH-Reproductive Health**

# CLIENT SATISFACTION WITH FAMILY PLANNING SERVICES AND ASSOCIATED FACTORS. TEMBARO DISTRICT; SOUTHERN ETHIOPIA

BY: DANIEL WEGU

MAJOR ADVISOR: MENGISTU MESKELLE (MPH/RH, PH.D. CANDIDATE)

CO-ADVISOR: TSEGAYE LOLASO (MPH/RH.)

## ABSTRACT

**Background** Client satisfaction influences the use of family planning and other reproductive health services. There is a shortage of evidence on satisfaction with family planning service among family planning users particularly in the southern part of Ethiopia. This study, therefore, aimed to assess the magnitude of client satisfaction with family planning service and its associated factors among reproductive-age women in public health facilities of Tembaro district.

**Methods** A facility-based cross-sectional study was conducted. A total of 411 clients nested in 4 health facilities were included in the analysis. The study population was further allocated to each of the selected facilities proportional to the size of their client flow. Systematic sampling was employed to select study units for the exit interview. Data collection instruments for this study were pre-tested structured questionnaires designed to interview the sampled family planning clients of the 4 governmental health facilities. The pre-coded data were entered into Epi Data version 4.2.0 and exported to SPSS version 25 for analysis. Finally, binary logistic regression analysis was carried out to identify independently associated factors at confidence interval of 95% and significance level of  $p$  value less than 0.05.

**Results:** Magnitude of client satisfaction with family planning service was found to be 46% [95%CI: 41-50.8]. Factors, such as residence [AOR=4.12; 95%CI:1.48-11.5] room localized with a bold letter [AOR=3.4; 95%CI:1.95-9.74], waiting time, [AOR=7.4; 95%CI:2.6-20.46], privacy [AOR=7.08; 95%CI:2.88-7.95], cleanliness, [AOR=3.09; 95%CI:1.17-8.14], poster in family planning room, [AOR=2.7; 95%CI:1.14-6.77], measuring weight [AOR=3.6; 95%CI:1.63-8.08] and describing side effects of methods [AOR=3.3; 95%CI:1.38-7.95] were found to be significantly associated with client satisfaction.

**Conclusion:** The overall magnitude of client satisfaction with the services was found to be low. Many of the factors that are attributed to low magnitude of client satisfaction are modifiable. This could call for organizing the family planning room as per the standard, keeping privacy, minimizing waiting time, and describing the side effects during provision of service

# COMMUNITY BASED ESSENTIAL NEWBORN CARE PRACTICE AND ASSOCIATED FACTORS AMONG MOTHERS IN SORO WOREDA, HADIYA ZONE, SOUTHERN ETHIOPIA

BY: TIGABU ABERA JENORE

ADVISORS: MIHIRETU ALEMAYEHU (MPH/RH ASSISTANT PROFESSOR)

TEZERA MOSHAGO (MPH)

## ABSTRACT

**Introduction:** *Despite the paramount importance of community based newborn care in Sub Saharan countries like Ethiopia, there are still little evidence in the area which is fueling the gap in availing essential newborn care at community level. Therefore, this study aimed to assess community based essential new born care practices and associated factors among women who gave birth in the last 6 months in Soro District, Hadiya Zone, Southern Ethiopia, 2019.*

**Method:** *A Community-based cross sectional study design was conducted from April to June, 2019. Data were collected from 448 mothers who gave birth in the last 6 months. The collected data were coded, cleaned and entered into computer using Epi-Data version 3.1 and analyzed using SPSS version 20 for further analysis. Variables with p value of <0.25 in bivariable analysis were selected as candidate to compete in multivariable logistic regression. Multivariable logistic regression was used to identify associated factors and the strength of Association was measured by AOR with 95% CI at p-value of <0.05. Finally, the obtained results were presented by using simple frequency tables, graphs and charts.*

**Results:** *The study showed that the magnitude of comprehensive essential newborn care practice was 29.5% (95% CI 25-33.5) in the study area despite 83%, 68.3% and 79.4%, of respondents practice good cord care, good thermal care and breast feeding within 1hours of life respectively. Secondary and above , (AOR=2.7, 95%, CI=1.44,-5.25), advise about Essential New born Care practices during ANC or other meeting (AOR=3.4, 95%, CI=1.78-6.44,), Facility Delivery (AOR=2.7, 95%, CI=1.58, 4.59) and mothers who have good knowledge of ENBC (AOR=2.3, 95%, CI=1.38, 3.78) were found to have statistically significant association with essential newborn care practice.*

**Conclusion:** *Generally, the coverage of essential newborn care practices was low. Working on women's education, ANC follow-up, place of delivery and improving their knowledge on initiation of breastfeeding and time of first bathing is highly recommended.*

**Key words:** Essential newborn care practice, Cross sectional, South Ethiopia.

# PREVALENCE OF TEENAGE PREGNANCY AND ITS ASSOCIATED FACTORS AMONG SCHOOL ADOLESCENT GIRLS IN WOLAITA SODO TOWN, SOUTHERN ETHIOPIA

BY: FEBEN GIRMA

MAJOR ADVISOR: DR ESKINDER WOLKA (PHD, ASSI.PROF)

CO-ADVISORS: MIHRETU ALEMAYEHU (PHD CANDIDATE, ASSI.PROF)

## ABSTRACT

**Background:** *Teenage pregnancy and childbirth to women under 20 years old continues to be a major global public health challenge. In Ethiopia, there are limited data on the prevalence and factors associated with teenage pregnancy.*

**Objective:** *To assess the prevalence of teenage pregnancy and its associated factors among school teenage girls aged 15-19 years in Wolaita Sodo town, Southern Ethiopia.*

**Methods:** *We conducted institution-based cross-sectional study. The total sample size required for this study was 601. Randomly selected teenage girls aged 15-19 using a systematic random sampling technique from high schools and preparatory schools of Wolaita Sodo Town were considered as study subjects. The quantitative data were collected by using a pre-tested, structured, and self-administered questionnaire and were entered into EpiData version 3.1 and exported to SPSS for window version 20 for analysis. Crude and adjusted odds ratios with 95% confidence interval results of multivariate logistic regression were used to assess the statistical significance of associations between exposure and outcome variables. Statistical significance was declared at  $P$  value  $< 0.05$ .*

**Results:** *The prevalence of teenage pregnancy of school girls in the Wolaita Sodo town was 14.6% [95% CI: 11.9%-17.7%]. Participants having family member who experienced teenage pregnancy [AOR = 3.34; 95% CI: 1.33- 8.36], and frequently listening/ watching radio/ TV presenting novels/ movies [AOR = 2.53; 95% CI: 1.04, 6.15] were found to increase the odds of teenage pregnancy of school girls; while condom use [AOR = 0.12; 95% CI: 0.03-0.45], and knowing from where to obtain modern contraceptive [AOR = 0.39; 95% CI: 0.17-0.94] were found to reduce the odds of teenage pregnancy of school girls.*

### Conclusions

*The prevalence of teenage pregnancy of school girls in the Wolaita area was higher than similar prevalence rate reported in southern Ethiopia. Having family member who experienced teenage pregnancy, and frequently listening/watching radio/tv presenting novels/ movies were found to increase the odds of teenage pregnancy of school girls, while condom use, and knowing from where to obtain modern contraceptive were found to reduce the odds of teenage pregnancy of school girls.*

**Key words:** teenage pregnancy, school girls, prevalence, associated factors, Wolaita Sodo town, southern Ethiopia

**DETERMINANTS OF ADVERSE BIRTH OUTCOME AMONG WOMEN WHO GAVE BIRTH IN HOSPITALS OF WOLAITA SODO TOWN, SOUTHERN ETHIOPIA**

**BY: ALEMAYEHU TALTO BOTORE (BSC)**

**MAJOR ADVISOR: TADELE DANA (BSC, MPH/RH, ASSISTANT PROFESSOR)**

**CO-ADVISOR: TEMESGEN LERA (BSC, MPH/RH, ASSISTANT PROFESSOR)**

**ABSTRACT**

**Introduction:** *Pregnancy and its outcome is a joyful experience for many pregnant women, but sometimes it leads to un-joyful manners that disrupt the family lifestyle that result in high individual and community costs. However, a little study was conducted on the determinants of adverse birth outcomes in Ethiopia. Hence, this research finding will help to spot the determinants of the adverse birth outcome.*

**Objective:** *To identify the determinants of adverse birth outcome among women who gave birth in hospitals of Wolaita Sodo town, Southern Ethiopia.*

**Methods:** *An unmatched case-control study was conducted among 468 women. The data were collected through face-to-face interview and medical chart review, entered into Epidata software version 3.1, and exported to SPSS 25 for analysis. Logistic regression was used to identify the determinants of adverse birth outcome. Independent variables with p-value less than 0.2 in bivariable analysis were considered as candidate variables for the multivariable logistic regression models. Finally, predictors of adverse birth outcome were determined at P- value less than 0.05.*

**Result:** *Maternal early age (AOR=8.2; 95%CI: 2.3-29.2) and maternal advanced age(AOR=4, 95%CI: 1.2-13.3), women who cannot read and write (AOR=5.2; 95%CI: 1.8-15.2), house-wife (AOR=6.4, 95%CI: 2.3-18.3), low wealth index (AOR=5; 95%CI: 1.6-15.6), hemoglobin level<11g/dl (AOR=3.7; 95%CI: 1.4-9.5), history of adverse birth outcome (AOR=6.9; 95%CI: 2.3-20.7), lack of ante-natal follow up (AOR=6.1; 95%CI: 1.4-26.4), referral system (AOR=2.6; 95% CI: 1.02-6.9), obstetric complication in index pregnancy (AOR=5.7; 95% CI: 2.1-15.1), and sex of fetus (AOR=7; 95% CI: 2.3-22.0) were found as determinants of adverse birth outcome.*

**Conclusion and recommendation:** *The most significant predictors of adverse birth outcome were related to conception care, referral system, and empowerment of women. Provision of inter-conception care, empowering women through education and economy and strengthen inter-facility communication were needed to reduce the adverse birth outcome.*

**Keywords:** Adverse birth outcome, Women, Wolaita, Ethiopia

**DETERMINANTS OF PREECLAMPSIA AMONG WOMEN WHO GAVE BIRTH IN  
HOSPITALS OF WOLAITA SODO TOWN, SOUTHERN ETHIOPIA: AN UNMATCHED  
CASE-CONTROL STUDY**

**BY: ESHETU HIZKEAL (BSC)**

**ADVISOR: TADELE DANA (MPH/RH, ASSI. PROF)**

**CO-ADVISOR: SOLOMON ABREHA (MPH/EPIDEMIOLOGY, ASSI. PROF)**

**ABSTRACT**

**Background:** *Preeclampsia is a syndrome with new onset of hypertension after 20 weeks of gestation. It is one of the five direct causes of maternal death. Studies conducted on the determinants of preeclampsia are scanty and not well studied in Ethiopia including the study area.*

**Objective:** *To identify the determinants of preeclampsia among women who gave birth in hospitals of Wolaita Sodo town, Southern Ethiopia, from June to November 2019.*

**Methods:** *Hospital based unmatched case control study design was used. The sample size was 408 (102 cases and 306 controls). Data were collected using pretested questionnaire, entered in to Epi-Data version 3.1 and exported to SPSS version 25 for cleaning and analysis. Chi-squared test and logistic regression analyses were computed to identify the association and causal determinants of preeclampsia.*

**Results:** *The odds of preeclampsia was higher among women with low economic status (AOR = 2.19; 95% CI: 5.59 – 14.27), family history of hypertension (AOR = 5.20; 95% CI: 2.23 – 12.15), family history of Diabetes Mellitus (AOR = 3.01; 95% CI: 1.34 – 6.74), present history of Gestational Diabetes Mellitus (AOR = 5.47; 95% CI: 1.57 – 19.10) and primipara (AOR = 10.80; 95% CI: 3.50 – 33.32). In contrast, Focused antenatal care (AOR = 0.34; 95% CI: 0.15 – 0.78) and nutritional counseling during pregnancy (AOR = 0.20; 95% CI: 0.050 – 0.78) were protective factors for preeclampsia.*

**Conclusions and Recommendations:** *low economic status, family history of hypertension and diabetes mellitus, history of gestational diabetes mellitus, primipara, antenatal care and nutritional counseling during pregnancy were associated with preeclampsia. Health care promotion, close monitoring, early diagnosis and treatment particularly on chronic diseases such as hypertension, diabetes mellitus, advocating and provision of essential antenatal care services and nutritional counseling and empowering women economically may have great impact in the prevention of preeclampsia.*

**Key words:** preeclampsia, Wolaita Sodo, Ethiopia

## **MPH-Epidemiology**

# INCIDENCE AND DETERMINANTS OF MORTALITY AMONG HIV INFECTED ADULT PATIENTS ON ANTIRETROVIRAL THERAPY IN ETHIOPIA: A SYSTEMATIC REVIEW AND META ANALYSIS

BY: HABTAMU LIJALEM

MAJOR ADVISOR: MR. SHIMELASH BITEW (MPH IN EPIDEMIOLOGY)

CO-ADVISOR: PROFESSOR TAKELE TADESSE

## ABSTRACT

**Background:** Antiretroviral therapy has been highly associated with reduction in the incidence of mortality in HIV/AIDS patients over time. However, there is a regional variation in the extent of reducing the incidence of mortality in many developing countries including Ethiopia. Hence, this study was conducted to generate summary evidences based data that would help to fill the gaps and improve services.

**Objective:** The objective was to estimate the pooled incidence of mortality and measure determinants of mortality among HIV infected adult patients started treatment in Ethiopia.

**Methods:** Articles were comprehensively searched on Pub Med, Google Scholar, Cochrane library, Scopus, and DOAJ databases using Boolean operators. A Dersimonian and Laird methods of random effect model was used to estimate incidence and determinants of mortality. Heterogeneity, publication bias and quality of each study were checked. Subgroup analysis was employed. Relevant data from each study were extracted. STATA software V. 14 was used for all statistical analysis.

**Result:** A total of 21 articles were finally reviewed and analyzes. The summary incidence of mortality was found to be 5/100 person year of observation (95% CI: 4 – 5/100pyo). The vast majority of the death (67%) occurred during the first year of HAART initiation. Advanced WHO clinical stage (Pooled HR 2.88; 95%CI: 2.2 – 3.8), low CD4 cells count (PHR 1.88; 95% CI: 1.5 – 2.4), low body weight (PHR 1.6; 95% CI: 1.2 – 2.2), low hemoglobin level (PHR 2.4; 95% CI: 1.7 – 3.4), presence of TB infection (PHR 2.9; 95% CI: 2.13 – 4.61), non – working functional status (PHR 3.9; 95% CI: 2.8 – 5.4), bad medication adherence (PHR 4.8; 95% CI: 3.2 – 7.2), lack of cotrimoxazole preventive therapy (PHR 1.5; 95% CI: 1.2 – 2.0), male sex (PHR 1.4; 95% CI: 1.2 – 1.8) and older age (PHR 1.2; 95% CI: 1.04 – 1.41) were determinants significantly associated with increased mortality in this study.

**Conclusion:** The incidence of mortality was high particularly early in the course of therapy. Many determinants contributed for this high rate of mortality. Comprehensive service and strict follow up should be given to avert this high rate of mortality.

**Key words:** Highly Active Antiretroviral therapy, incidence, AIDS related death, survival, adult HIV patients and Ethiopia.

# PREDICTORS OF NEONATAL SEPSIS IN HOSPITALS AT WOLAITA SODO TOWN, SOUTHERN ETHIOPIA: INSTITUTION BASED UNMATCHED CASE CONTROL STUDY

BY: ATKUREGN ALEMAYEHU

MAJOR ADVISOR: MIHIRETU ALEMAYEHU (BSC, MPH/RH, ASSI. PROF IN PUBLIC HEALTH)

CO-ADVISOR: NETSANET ABERA (MSC, ASSI. PROF)

## ABSTRACT

**Background:** *The neonatal period is a time for an infant completing many of the physiologic adjustments required for life outside the Uterus. Neonatal sepsis plays an important role in causing morbidity and mortality among neonates in developing countries accounting for 30-50% of total deaths each year. If we know the sepsis status of new born it is important to give appropriate new born care to neonates. In addition by knowing factors which cause neonatal sepsis, then the stake holders will get opportunity to reduce the problems. So, this research will fill gaps in maternal health education, delay in early initiation of treatment and breast feeding to high quality services to manage infections which leads to sepsis*

**Objective:** *The aim of this study was to determine the Predictors of neonatal sepsis at Wolaita Sodo University Teaching Referral Hospital (WSUTRH) and Sodo Christian General Hospital (SCGH), Southern Ethiopia. April 15- July 15, 2019*

**Method:** *An institution based Unmatched case control study was conducted among neonates at Wolaita Sodo University Teaching and Referral Hospital and, Sodo Christian General Hospital by using consecutive sampling technique. Neonates diagnosed as sepsis was considered as cases and neonates who do not fulfil sepsis criteria has been controls. A structured and pretested questionnaire of face to face interview with the index mothers, record review and checklists to collect data were used. The data were entered into Epi. data version 3.1 and exported to SPSS version 24.0 for analysis. Summary statistics of bivariate and multivariate logistic regression analysis were conducted to determine Independent factors associated with neonatal sepsis for all variables with  $p < 0.25$  bivariate analysis, Odds ratio with 95% confidence interval was described and statistical significance was reported at  $p < 0.05$  in the multivariate logistic regression has been taken to measure the strength of the association.*

**Results:** *Factors significantly associated with neonatal sepsis among neonates were Maternal age 15 - 20 and 21-30 (AOR=4.13; 95% CI [1.71, 9.93], and AOR=4.96; 95% CI [1.25, 19.6]), Mothers with Low income/wealth (AOR=2.76; 95% CI [1.02, 7.52]), UTI/STI (AOR= 2.72; 95%CI: [1.06, 6.97]), Intra-partum Infection/ (AOR=2.93; 95%, CI: [1.32, 6.47]), ANC follow up < 3 Visits (AOR=2.94; 95% CI: [1.21, 7.16]), APGAR score <7 (OR=15.1; 95% CI: [4.78, 47.65]), low birth weight (AOR=8.46; 95% CI [3.52, 20.3])and Breast feeding time started <60minute (AOR=12.5; 95% CI [3.80, 41.7]).*

**Conclusion:** *The study has found Risk factors of Neonatal sepsis which were maternal age, wealth/income, maternal UTI/STI, intra-partum fever, ANC visit  $\leq 3$  times, APGAR score <7, low birth weight, and starting time of breast feeding. Therefore, Maternal Health education During ANC visit, Perinatal and new-born care and, early initiation breast milk can decrease neonatal mortality and morbidity*

**Keywords:** Neonatal sepsis, New born, Wolaita

**DETERMINING SPATIAL VARIATIONS AND FACTORS ASSOCIATED WITH ACUTE RESPIRATORY INFECTION SYMPTOMS IN UNDER-FIVE CHILDREN IN ETHIOP, EDHS 2016.SPATIAL AND MULTILEVEL ANALYSIS**

**BY: MOHAMMED TEMAM (BSC, MSC CANDIDATE)**

**MAJOR ADVISOR: AMHA ADMASSIE (PHD)**

**CO-ADVISOR: SHIMELASH BITEW (MPH)**

**ABSTRACT**

**Background:** Acute respiratory infections comprise infection in any part of the respiratory system. Globally it is responsible for 4million deaths of under-five children per year. It is also a leading cause of death in developing countries. Seven percent of Ethiopian under the age of five year children has symptoms of Acute Respiratory Infections and treatment was sought for only three out of 10 children.

**Objective:** The aim of this study was to determine spatial variations and factors associated with Acute Respiratory Infection in under-five children in Ethiopia using 2016 EDHS data.

**Methodology:** This study has used national level spatial and non-spatial Ethiopian Demographic and Heath Survey 2016 data. Data extraction, spatial and multilevel analysis of Acute Respiratory Infections was done using SPSS version 25, ArcGIS version 10.3 and STATA version14 statistical software respectively. Spatial autocorrelation, hotspot analysis, interpolation and multilevel analysis were computed using Global Moran's I, Gets Ord G\* index, Ordinary Kriking model and maximum likelihood estimation respectively. Samples of 10339 children were used from 16,650 selected households and 622 clusters were used for spatial analysis.

**Results:** The overall prevalence of Acute Respiratory Infections symptoms in Ethiopia was 6.7% (95% CI: (5.7-7.8)).There is significant global positive spatial autocorrelation of the prevalence of Acute Respiratory Infections symptoms with ( $I= 0.14$ ,  $Z=4.72$  and  $P\text{-value}<0.001$ ) and at country level 111(27.7%) clusters were identified as statistically significant hotspots (GiZScore positive and  $p\text{-value} <0.05$ ).Smooth interpolated surface map predicting the prevalence of Acute Respiratory Infections symptoms shows high prevalence was predicted in northern, south northern and central parts of Ethiopia. Random intercept model reveals that age of children, size of household, duration of breastfeeding; wealth index, region and place for cooking food have associated with Acute Respiratory Infections symptoms.

**Conclusion:** This study revealed that the distribution of Acute Respiratory Infections symptoms in Ethiopia is not random or it shows local clustering. It also revealed that 20.7% of the total variability in developing Acute Respiratory Infections symptoms was due to variations between clusters.

Keywords: Acute Respiratory Infections, Ethiopia Demographic and Heath Survey and Spatial autocorrelation

# STILLBIRTH AND ASSOCIATED FACTORS AMONG DELIVERIES ATTENDED IN PUBLIC HOSPITALS OF WOLAITA ZONE, SOUTHERN ETHIOPIA.

BY: JEGNAW WOLDE (BSC)

ADVISOR: MIHRETU ALEMAYEHU (MPH/RH, ASSISTANT PROFESSOR)

## ABSTRACT

**Background:** Stillbirth is unfavorable outcome of pregnancy, which is still prevalent in many countries despite remarkable efforts to improve the care of pregnant women. While producing estimates consistent with other national reports, all are hindered by limited data and important causes of death are likely to be missed. However; there is scarcity of data on stillbirth in Ethiopia particularly in wolaita zone.

**Objective:** To assess the prevalence and associated factors of stillbirth among deliveries attended in public hospitals of wolaita zone, southern Ethiopia.

**Methods:** A facility based cross sectional study was conducted in public hospitals of wolaita zone. Stratified sampling was used to select 737 mothers. A pretested interviewer administered questionnaire was used for data collection. Data was entered using Epidata version 3.1, and analyzed using SPSS version 20. Bivariate and multiple logistic regression analysis were used and the crude and adjusted odds ratios at 95% confidence interval with P-value <0.05 was considered to declare a result as statistically significant.

**Result:** This finding showed that 8.7% of [95% CI: 6.5-10.8] stillbirth among deliveries attended in public hospitals for the study participants. Being rural residence [Adjusted OR = 2.57, 95% CI: 1.23, 5.40], number of pregnancy [Adjusted OR = 3.82, 95% CI: 1.17-12.47], complication during pregnancy and labor [Adjusted OR = 6.23, 95% CI: 2.67-14.58], history of stillbirth [Adjusted OR = 6.89, 95% CI: 2.57-13.57], type of delivery [Adjusted OR = 7.13, 95% CI: 2.71-18.73] were found to be factors associated with stillbirth.

**Conclusion and recommendation:** The prevalence of stillbirth among mothers who gave birth in public hospitals of Wolaita zone was found to be high compared to national and regional figures. Therefore, the federal government and regional government should strengthen communication and discussion with grass root level health facility in order to promote women to use maternal and health care services. The zonal health department and other concerned bodies should focus on implementation of the strategies and policies causing stillbirth.

**Keywords:** stillbirth, public hospital, Ethiopia.

**DETERMINANTS OF FIRST-LINE ANTIRETROVIRAL TREATMENT FAILURE AMONG ADULT HIV INFECTED PATIENTS RECEIVING ANTIRETROVIRAL TREATMENT AT WOLAITA SODO TEACHING AND REFERRAL HOSPITAL, SOUTH ETHIOPIA**

**BY: ZEWDINEH ZEKARIAS**

**MAJOR ADVISOR: TEZERA MOSHAGO (MPH)**

**CO-ADVISOR: SOLOMON ABRHA (MPH)**

**ABSTRACT**

**Background:** -Antiretroviral treatment suppress HIV viral replication, failure to which can result in treatment failure and development of ARV drug resistance, which in turn has implications to the individual patient, ART programs, and potential serious public health implications. However, there were few studies done on the determinants of treatment failure in adult patients on first-line antiretroviral therapy in Ethiopia in general, and no study was done in the study area in particular. The aim of this study was to identify determinants of first-line antiretroviral treatment failure among adult HIV infected patient receiving ART at WSTRH, south Ethiopia.

**Method:** -Institution based unmatched case control study was employed from April to July, 2019 at WSTRH on 127 cases and 254 controls in adult HIV patients on first-line antiretroviral treatment. All cases were included and comparable controls were selected using systematic random sampling technique. Data were collected by using a pretested data abstraction format prepared based on the national guidelines and potential risk factors that do not documented was collected with interview from each study participant using structured questionnaires. The collected data were coded and entered in to Epidata version 3.1, then exported and analyzed in SPSS version 20. Multivariable logistic regression analysis was done to identify the independent determinants of first line treatment failure.

**Results:** - Independent determinants of first line ART failures were treatment interruptions [AOR = 1.89, 95% CI: 1.08, 3.29], fair and poor adherence [(AOR= 3.64, CI: 1.93, 6.86)], [(AOR=2.13, CI:1.07,4.23)], substance use [(AOR = 3.15, 95% CI: 1.52, 6.53)], moderate social support [(AOR = 2.54, 95% CI: 1.35, 4.75)] and stigma [(AOR = 2.25, 95% CI: 1.06, 4.76)].

**Conclusion:** - this study showed that, treatment interruption, fair and poor adherence to ART treatment, substance use, moderate social support and stigma were the independent determinants of first line antiretroviral treatment failure.

**Keywords:** -treatment failure, predictors, HIV, ART.

**MAGNITUDE OF DEPRESSION AND ASSOCIATED FACTORS IN HIV-INFECTED ADULT PATIENTS ATTENDING ART CLINIC IN WOLAITA SODO UNIVERSITY TEACHING REFERRAL HOSPITAL SODO ETHIOPIA**

**BY: TEREFU BASHE**

**ADVISERS: WOLDIE FACHA (MPH, ASS.PRO)**

**TEZERA MOSHAGO (MPH, PHD FELLOW, ASS.PRO)**

**ABSTRACT**

**Background:** *Approximately, 350 million people are currently living with depression. It is the fourth leading cause of disability worldwide and it will become the second leading cause of disability by 2020. Depression occurrence in PLHIV leads to alteration of economic productivity, decrease of working abilities, social isolation, physical decline and difficulties in solving problems, again more severely in PLHIV.*

**Objective:** *This study aimed to assess magnitude and factors associated with depressive symptom among people living with HIV attending Wolaita Sodo University, Sodo, Ethiopia.*

**Methods:** *Hospital-based cross-sectional study was implemented in April 1-May 30, 2019. A total of 410 HIV-infected patients who had regular visit at Wolaita Sodo University teaching and referral hospital, Sodo, Ethiopia were included in the study. Systematic random sampling technique was used to recruit study participants. Patient Health Questionnaire item nine (PHQ-9) was used to assess depressive symptoms. In addition, Oslo social support scale and HIV perceived stigma scale was used to assess social support and HIV-related-perceived stigma, respectively.*

**Results:** *This study revealed that the magnitude of depression was 50.5% of among HIV-infected patients on ART. Being male were [AOR= 1.53 (95%CI 1.016, 2.311)], Urban resident [AOR = 2.20 (95%CI 1.29, 3.75)], Patients who had opportunistic infection [AOR= 1.98 (95%CI 1.27, 3.11)], poor medication adherence [AOR= 1.79 (95%CI 1.13, 2.85)] and high HIV-related perceived stigma [AOR= 1.66 (95%CI 1.04, 2.67)] were contributing factors to this magnitude of depression.*

**Conclusion:** *In study, nearly half of the patients in ART clinic were depressed. Male sex, those patients living in urban, have opportunistic infections, poor medication adherence and have high HIV-related perceived stigma were significantly associated with depression. Hence, depression is highly prevalent among HIV-positive patients, still under diagnosed and undertreated are there in ART clinic.*

**Keywords:** prevalence, depression, HIV/AIDS, patient

# INFECTION PREVENTION PRACTICE AND ASSOCIATED FACTORS AMONG HEALTH CARE WORKERS IN GOVERNMENTAL HEALTH CARE FACILITIES OF WOLAITA ZONE, SOUTH ETHIOPIA

BY- DEREJE SIRAW (BSC )

NAME OF ADVISOR:-MR. YIBELTAL KASSA(MPH,ASSISTANT PROFESSOR)  
DR. AMEHA ADEMASIE(PH.D. )

## ABSTRACT

**Background:** *Infection prevention and control is a universally vital component of all health systems. Lack of infection prevention affects the health and safety of both people who use services and those who provide them. Health-care workers (HCWs) often come in contact with blood - borne pathogens and other microorganisms.*

**Objective:** *To assess the practice of infection prevention control and associated factors among health care workers at Wolaita Zone SNNPR*

**Method:** *A facility-based cross-sectional study design was conducted from April 2019 to June 2019. Multistage sampling techniques were used to select a total of 758 health care works. A self-administered questionnaire was used for data collection. The data were analyzed using SPSS version 20. Bivariate analysis was done and all explanatory variables which have an association with the outcome variable at p-value <0.25 was selected for multivariate analysis. Then multivariate analysis at P-value < 0.05 and AOR with 95% CI was used to measure the degree of association between independent variables and the outcome variable.*

**Result:-***Overall infection prevention practice score of respondents were 54.1% at 95% of CI (50.6-57.5). Result of multiple logistic regression analysis showed that sex (AOR= 0.335; 95%CI (0.172, 0.655)), educational status (AOR= 1.99 (95% CI=1.065, 3.75)) and knowledge (AOR= 4.595 (95% CI=1.799, 11.735)) had positive association with infection prevention practice.*

**Conclusion:** *- Generally, the results of this study revealed that 54.1% of health care workers at wolaita zone had good infection prevention practice. Strengthen follow up of HCWs to adhere to infection prevention recommendations, along with other supporting infrastructures like sustainable and reliable water supply are crucial*

**Keywords:** *- practice of infection prevention, healthcare, infection prevention, associated factors*