



**INFLUENCE OF KENYAN SIGN LANGUAGE  
ON SYNTACTICAL PATTERNS OF WRITTEN ENGLISH  
IN PRIMARY SCHOOLS FOR THE DEAF IN KENYA**

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**Abstract:**

Performance of English in KCPE examination by learners who are deaf has shown a trend of low scores as compared to their hearing counterparts in Nakuru Region. For four consecutive years; 2010, 2011, 2012 & 2013 English mean scores by learners who are deaf in six primary schools in Nakuru region, Kenya were: 29.74, 31.41, 29.58, & 30.27 respectively, while in six selected regular primary schools within the same counties in the respective years, English mean scores were: 48.74, 47.89, 47.87 & 56.24. A number of studies have looked at effect of language of instruction and age of onset of hearing loss as variables, yet none considered Effect of Kenya Sign Language (KSL) on written English grammar. The purpose of this study was to analyse the influence of KSL on syntactical patterns of written English written English grammar among learners who are deaf among learners who are deaf in classes five, six and seven in Nakuru Region. Objectives of this study were to: determine influence of KSL on syntactical patterns of written English written English grammar among learners who are deaf in classes five, six and seven. In this study, Language learning was guided by behaviourist theory by who? Descriptive research design was used. Data collected was used to describe nature of existing conditions and relationships. The study was carried out in Nakuru Region, Kenya. Target population comprised 157 learners who are deaf and 21 teachers for English. Saturated sampling technique was used to select 141 learners and 18 teachers. Data was collected using document analysis guide and questionnaire for teachers. Reliability of research instruments with a correlation coefficient( $r$ ) of 0.75 was accepted in a pilot study involving 16 learners and 3 teachers, constituting 10% of research population. Face validity of research instruments was established by experts in Department of Special Needs Education of Maseno University. Qualitative data was organised into categories

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and reported in verbatim as themes and sub-themes emerged. Results from this study established that: learners had difficulties in syntax. OSV word order basic for KSL was evident in students' written English grammar instead of SVO basic word order for English. This study concluded that KSL had negative impact on syntactical patterns of written English, written English grammar among learners who are deaf among learners who are deaf in classes five, six and seven in Nakuru Region, Kenya. This study recommended use of bilingual approach as a media of instruction to enhance mastery of English grammar for learners who are deaf.

**Keywords:** influence of KSL, syntactical patterns, written English, written English grammar, learners who are deaf

### 1. Background to the study

Rice (2008) defines language as a process or set of processes involving symbols which should carry the same meaning both to originator and receiver in order to convey intended message. Halut and Howard (2006) points out that sign language has three components other languages have form, content and use. Form deals with phonology which is the aspect of sequencing of syllables and sound in words. Morphology deals with how a part of the word holds meaning. Syntax deals with order of words to bring out meaningful sentences. Content deals with semantics which govern meaning of words and different word combinations. Use involves Pragmatics, rules which govern language used in communicative environment.

Language development in children is dependent on consistency, frequency and accessibility of the mode of communication in a child's environment. Delayed exposure to an accessible first language in early life leads to incompetent acquisition of all subsequent languages to be learnt. (Sandra 2005) argued that Children who are deaf, born of parents who are hearing, grow up in sign language deficient environments which lead to deficient acquisition of vocabulary. These children form a cohort of unique children in the world who cannot naturally acquire a mother tongue from their mothers (Mellon *et al.*, 2015)

Halut and Howard (2006) points out that Syntax deals with order of words to bring out meaningful sentences. Studies conducted in the area of syntactical structures used by learners who are deaf concentrated on critical period of language acquisition (Mayberry, 2007). Angela (2014) in her study: *Morphosyntactics Development of Preschool Children with Hearing Loss using Clinical Evaluation of Fundamental Language (CELF) Preschool Edition* involving 47 preschoolers using hearing aids or cochlear implants did an itemized analysis on *word structure* and *sentence structure* to determine whether children with Hearing Loss (HL) performed within the standard range. The results indicated specific patterns of errors in syntactical order with this group. The study was conducted with preschoolers using hearing aids or cochlear implants and live in community whose first language is spoken English. Ayoo E.A (2012) in her study on *Morphosyntactics errors in*

*written English of standard eight hearing impaired pupils* concentrated on effect of degree of hearing loss in relation to morphosyntactics errors among this group of learners. Findings of that study confirmed that written English for this category of learners had challenges with the verb, with partially deaf showing better mastery of English as compared with their profoundly deaf colleagues. None of the studies looked into effect of KSL on syntactical patterns of written English grammar among classes five, six and seven learners who are deaf. This study therefore intended to analyse errors on syntactical patterns of written English grammar by learners who are deaf in classes five, six and seven in Nakuru Region in Kenya.

Deleterious effects of delayed First Language (L1) are apparent at all levels of linguistic structures namely; syntax, phonology and lexicon. Early language acquisition not only bestows facility with linguistic structure at the L<sub>1</sub>, but it also bestows ability to learn linguistic structure throughout life (Mayberry 2006). Delays and deficits in language input for children who are deaf due to limited or lack of auditory input limit incidental learning of first language. This hinders fluent communication with the hearing community. Universal Grammar theory by Chomsky argues that Learning of a second language (L<sub>2</sub>) is not so much an isolated thing as it builds on the rules and grammar of the first language (L<sub>1</sub>) by discovering how to set parameters for the new language (Cook 2007). Children who are deaf do not have a written or spoken language on which to pin their second language learning since sign languages are entirely visual gestural languages Angela (2014) in her study: *Morphosyntactics Development of Preschool Children with Hearing Loss using Clinical Evaluation of Fundamental Language (CELF) Preschool Edition* involving 47 preschoolers using hearing aids or cochlear implants did an itemized analysis on *word structure* and *sentence structure* to determine whether children with Hearing Loss (HL) performed within the standard range. The results indicated some specific patterns of errors with this group. Delayed exposure to an accessible first language in early life leads to incompetent acquisition of all subsequent languages as earlier mentioned. Mayberry (2006) argue that deleterious effect of delayed L<sub>1</sub> are apparent at all levels of linguistic structures namely; syntax, phonology and lexicon. Early language acquisition not only bestows facility with linguistic structure at the L<sub>1</sub>, but it also bestows ability to learn linguistic structure throughout life. Knowledge of lexical items, rules of morphology, semantics and phonology are crucial in language mastery. Lozanova & Satchev (2009) argue that Consistency in the use of syntactically correct patterns in written English determine mastery of correct sentence patterns. Syntactically correct English sentence patterns differ as determined by sentence type. Such sentences are; affirmative, negative, imperative, interrogative and declarative sentences. Competence in variation on: subject/ verb/ object (SVO) order shapes proficiency in written English for learners who are deaf. Whenever the SVO order is disturbed, the resulting sentence pattern often poses a challenge for students who are deaf in acquiring syntactically correct sentence in written English such as in passive formations, questions, participles and gerunds among others.

Examples in sentences;

- i. Lions eat meat.  
S V O (The common sentence pattern in written English)
  
- ii. What do lions eat?  
O V S V
  
- iii The girl asked the mother what food to cook.  
S V O O S V

In sentence i Subject Object Verb (SVO) word order for English sentences is observed.

In sentence ii a wh-question '*what*' represents the object of the verb '*eat*.' However, the position of *eat* and *what* had to move to the beginning of the sentence in accordance with the rules of English syntax. This gives rise to a different word- order (OVS). Such adjustments confuse learners who are deaf (Adoyo, 2004).

In sentence iii the first half of the sentence is the main clause which conforms to the SVO word order, but the second part of the sentence is the auxiliary sentence which does not conform to the rule. Written English grammar word order for questions is OSV word pattern. This study was conducted among college learners who are deaf in Europe where L<sub>1</sub> is English language. However, effect of KSL on learners who are deaf in primary schools in Kenya was not mentioned. So, this study intended to find out effect KSL has on written English sentence structure (syntax) among learners who are deaf in classes five, six and seven in Nakuru Region in Kenya.

Raga (2014) conducted a study to investigate the problem of poor performance by students with hearing impairments in Kenya certificate of secondary education (KCSE). The study was conducted in Kuja secondary school for the deaf, Migori county. Comparison of grammatical pattern of written KSL in relation to English pattern was done. The findings indicated that mixing up KSL with written English sentence patterns was the reason for low academic scores in KCSE of signed language for learners in high school who are deaf. Influence of KSL on written English grammar among learners who are deaf in primary school was not looked into. Therefore, this study intended to find out Effect of KSL on written English grammar among learners who are deaf in primary schools

Hochgensang (2007) in his study on literacy among deaf children in Kenya established that areas of difficulty particularly include acquisition of morphology, syntax and vocabulary such as inflectional affixes, function words, deviation from canonical word order and limited breadth and depth of lexical knowledge. However analysis of errors in syntactical patterns in written English among learners who are deaf to ascertain influence of Kenya sign language was not discussed This study, therefore, intends to establish Effect of Kenya sign language on syntactical patterns in written English grammar among learners who are deaf in classes five, six and seven in primary schools in Nakuru Region in Kenya.

## 2. Statement of the Problem

Kenya Certificate of Primary Education (KCPE) performance in written English grammar by learners who are deaf has been notably low as compared to their hearing counterparts in the same grade. For learners to attain good grades in English language in Kenya Certificate of Primary Education (KCPE), they must acquire competence in English grammar which constitutes syntax. Class four is a transition class where mother-tongue is left as learners begin to be instructed in English. Whereas class eight is the exit class. So the extent to which learners who are deaf in classes; five, six and seven acquire English grammar concepts would be an indicator of their expected performance in Kenya Certificate of Primary Education (KCPE) Examination. It is also noted that English is the recommended language of instruction and communication in Kenyan Education system. The highest mean score attained in English language by learners who are deaf from 2010 to 2013 was 31.41 mean score as compared to 56.24 mean score attained by learners who are hearing in selected primary schools. In order to understand the cause for this trend of low attainment in English language, this study, intended to establish effect Kenya sign language has on syntactical patterns of written English in written English among learners who are deaf in classes five, six and seven in primary schools in Nakuru Region in Kenya.

### 2.1 Purpose of the study

- The purpose of this study was to establish the influence of Kenya Sign Language on syntactical patterns of written English by learners who are deaf in Kenya.

### 2.2 Objectives of the Study

Objective of this study was to:

- Determine effect of Kenya sign language on syntactical patterns of written English.

## 3. Research Methodology

This study used Descriptive Research Design. The study was carried out in Residential schools for learners who are deaf within Nakuru region in Kenya. The region lies within coordinates 0° and 36°E. Nakuru Region is in the heart of the Great Rift Valley in the western block of Kenya. The study involved 157 learners who are deaf in classes; five, six and seven in six primary schools for learners who are deaf and 21 teachers for English in classes five, six and seven in schools for learners who are deaf in Nakuru Region in Kenya. Saturated sampling was used to select 141 pupils and 18 teachers in six primary schools for learners who are deaf. Saturated sampling technique is a non-probability sampling technique where all the members of the target population are selected since they are too few to make a sample out of them (Orodho, 2009). Document analysis of learners' written English text on a familiar topic such as "my school" was used to analyse errors in the use of vocabulary. Questionnaires for teachers for English in the selected primary schools for learners who are deaf were also analysed. Face and content validity

of the instrument used in this study; the research instruments were presented to experts at the department of Special Needs Education faculty of Education of Maseno University for scrutiny. Reliability of research instruments that were used in this study were established through Test Retest with a pilot study involving 16 learners who are deaf and 3 teachers constituting 10% of the study population. Qualitative data from Itemized analysis on vocabulary was analysed by content analysis method. Quantitative data was analysed by use of descriptive statistics in the form of means, percentages and frequencies which will be reported descriptively. Qualitative data was transcribed and organised into themes and reported in verbatim.

### 3. Results and Discussions

From content analysis of English written work of learners, various omissions were noted in the pupil's written work. From the findings of this study, 139 (98.58%) majority learners who are Deaf had errors related to omissions of grammatical. As evident in learners written English work presented as excerpt 31 typical of pupil's written English grammar.

From excerpt 31 the following sentence "*...classroom children in read*" is an example of how written work by learners who are deaf had numerous errors of omission. */...classroom children in read/* should have been "*children read in the classroom.*" Article 'the' has been omitted. It also reflects a KSL sentence structure pattern From the same excerpt, the phrase, */..... People game ball run basket/* should have been: "*...in basket ball, people run with the ball.*" Two prepositions 'in' and 'with' were omitted in such a short statement. This is an indicator of the fact that KSL mode of communication is practically short and topical in nature, leaving out words which may crowd the sentence. KSL sentence structure has a negative effect on written English grammar work by learners who are deaf. written work by Learner 52, displayed as excerpt 12 had omission of article; **the** and auxiliary verb **with**, as a result of effect of Kenya Sign Language which does not use articles and often leaves out auxiliary verb in its morphosyntactics. This was reflected in written work by most learners who are deaf.



(SA) School out BIRD Two (GATE) STAND STAND  
 ONE RED BLACK OTHER STAND BOOKS cow RED  
 THING SIGN NAME BEDROOM Room SIT KITCHEN  
 NEIGHBOUR School THE Fat woman School THE  
 School Susuwa School the school Houfle  
 Paul school ONE out BLACK OTHER STAND  
 MUNG MILK cow cat sat NIE woman school S  
 Comlisa my I yasa Banana Post school  
 many School THE Fat sat OTHER STAND The  
 School Paul NEIGHBOUR School THE Room sit out  
 other our Paul my school GATE STAND STAND  
 Books school DEAF THE washum BUS cat wonse  
 SPEET School ONE Fat woman school THE  
 GATE STAND STAND School out BIRD Two  
 BUS car ER woman sunns School our Thou  
 Impara atmosphas Policy School our Thou  
 School Comlisa my yasa Banana Post school  
 wonse Two GATE STAND STAND School  
 School out BIRD Two GATE STAND  
 School our Bus Book our my siloh GATE  
 other our many school Susuwa school THE  
 Books School DEAF THE washum BUS cat won  
 BUS wonse Tow out BIRD Two GATE STAND  
 Impara atmosphas Plunns School our Thou THE  
 BUS car cat woman sunns School our THE our  
 Books ONE RED ONE BLACK OTHER Two out  
 BUS STAND STAND Fat woman school  
 School DEAF THE washum BUS Banana THE  
 School Par & Susuwa Banana Post sch

Excerpt 12: Errors of omission in syntax

The written work by Learner 52, displayed as excerpt 12 omission of 'the' and, 'with' in the way as a result of effect of KSL which does not use articles in its morphology. This was reflected in written work by most respondents.

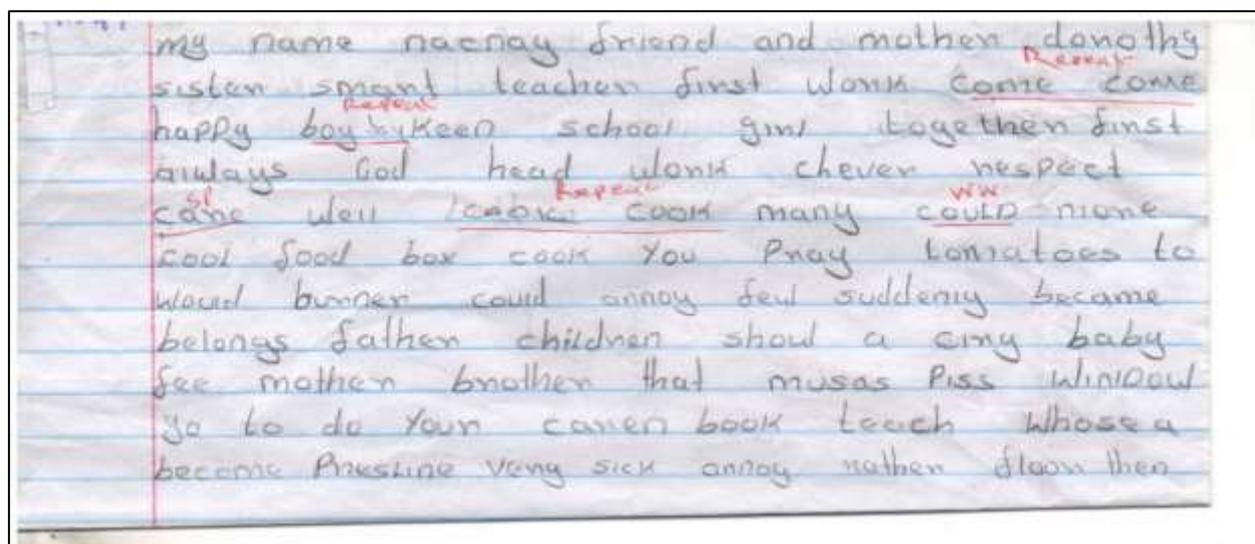
It is evident from excerpt 12, omission of plural marker morpheme/s/ within the noun in the phrase, “..... **BIRD TWO** ...” which should have been “... *two birds* ...” the morpheme /s/ in the word bird was omitted as a result of effect of KSL on written English. In KSL plural is marked by signing of singular noun proceeded by a specific number reduplication of the noun. Such morphological effects were evident in excerpt 12 above. The finding of this present study agrees with. Bochner & Bochner (2009) established that Sign languages are limited in the use of English language articles. This limitation distorts the intended meaning of written English sentence.

Finding of this present study, however, specifically demonstrated how lack of articles and auxiliary verbs in Kenyan sign language results in omission of articles and auxiliary verbs in syntactical patterns of written English grammar by learners who are deaf. Results from this current study indicated that lack of mastery of syntactical patterns in written English grammar is a contributing factor to low academic performance in written English grammar in Kenya Certificate of Primary Education (KCPE) terminal examination among primary school learners who are deaf in Nakuru Region-Kenya.

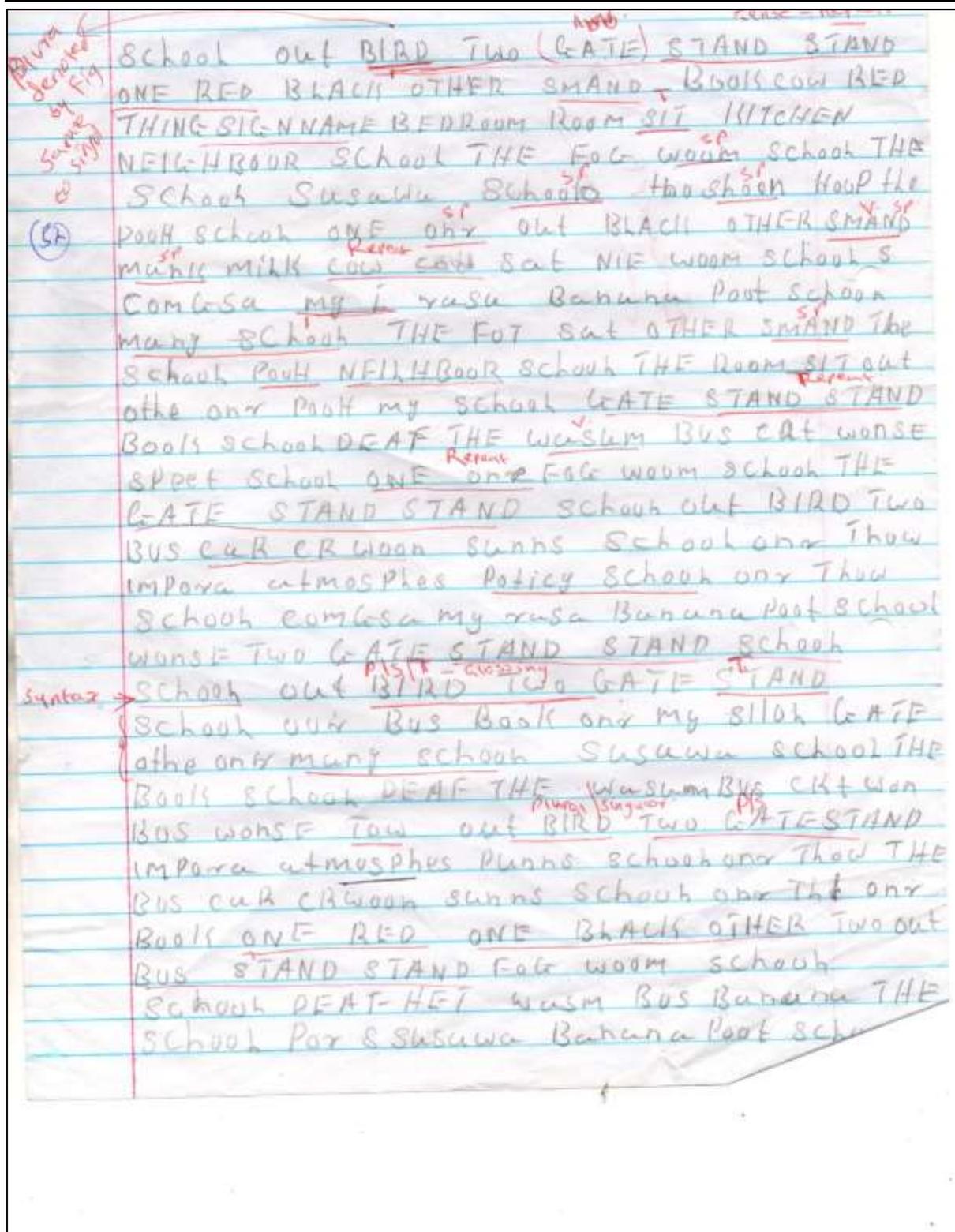
#### 4.2.3 Errors of Commission in Syntax

From the content analysis, most learners 135 (95.74%) who are deaf had errors of commission either in spellings or repetition and reduplication of words in their written work.

From excerpt 19 and excerpt 43, errors of commission were noted as follows: The phrase “..... *teacher first work come come happy....*” the error of commission is seen in the repetition of the word **come**. Other than this lack of proper punctuation was common in the written work of learners who are deaf. In the second phrase, “..... *wellcook cook many....*”. Repetition of the of the word **cook** is an error of commission and written in present tense, while actually the learner was referring to a past event. The foregoing error was evident in almost all learners’ written English grammar work displayed as excerpt, 12 19 and 43.



**Excerpt 19:** Errors of Commission in Syntax reduplication of words



Excerpt 43: Error of reduplication and repetition of words

From excerpt 43, various errors of commission were observed. Such as in the phrase “..... **BIRD TWO GATE STAND STAND**.....” **stand** was an error of commission. Although, the same has numerous errors of ambiguity in terms of error in word order, and the word bird is not pluralised, yet the learner had mentioned two birds.

In the phrase, “..... *man milk cow cow...*” the word cow in the phrase has been repeated. In KSL reduplication of a verb denotes; emphasis or habitual occurrence. Reduplication of a noun denotes plurality of the same. Error of reduplication or and repetition of words in written English grammar among learners who are deaf is an effect of KSL. This occurrence is evident in learners’ written work presented as excerpts 19 and 13, These findings are in conformity with Raga (2014), Hochgensang (2007), Adoyo 2004 who established that areas of difficulty particularly include acquisition of syntax such as deviation from canonical word order and limited breadth and depth of lexical knowledge of language. However, findings from this present study from content analysis of written work of learners who are deaf in primary schools, show how Kenyan Sign Language syntactical word order reduplicating or repetition of words directly transferred to written English grammar by learners who are deaf. This confirms that Kenyan sign language has an effect on written English syntax by learners who are deaf.

Results from content analysis of learners’ work were triangulated with views from teachers for English in schools for learners who are deaf. Questionnaires were used to collect teachers’ views on the influence of KSL on syntax of written English by learners who are deaf. The results were tabulated in table six.

**Table 7:** Teachers views on the influence of KSL on syntactical pattern in Written English Grammar among Learners who are deaf (n=18)

Statement	SA	A	U	D	SD	Mean
	f (%)	f (%)	f (%)	f (%)	f (%)	
Word order not grammatically correct in English	18 (100%)	0	0	0	0	1
Omission of written English grammar items such as articles	16 (89%)	2 (11%)	0	0	0	1.11
Reduplication and or repetition of words	17 (94%)	1 (6%)	0	0	0	1.06
Written full word or sentences in capital letters	18 (100%)	0	0	0	0	1

Key: SA-Strongly Agree, A-Agree, U-Undecided, D- Disagree, SD- Strongly Disagree

Syntactically correct English sentence patterns differ as determined by sentence type. Such sentences are: affirmative, negative, imperative, interrogative and declarative sentences Adoyo (2004). Competence in variation on: subject/ verb/ object (SVO) order shapes proficiency in written English for learners who are deaf. Whenever the SVO order is disturbed, the resulting sentence pattern often poses a challenge for students who are deaf. Results tabulated in table 7 confirmed this. All the 18(100%) respondent held the same opinion of strongly agreeing (SA) that Word order in written English grammar by learners who are deaf are not grammatically correct. On errors of omission 16(89%) of 18 respondents strongly agreed (SA) that Written English sentences show omission of articles (a, an, the) or affixes eg -/s/,/\_ation/, /un-;/ the remaining 2(11%) agreed with the statement as well. 17(94%) of respondents strongly agreed that written work of learners

had on the statement on reduplication and repetition of words 94% strongly agreed with that statement, only 6% weakly agreed. All the 18(100%) of teachers for English were in agreement with the statement that learners who are deaf Write full words or sentences in capital letters. while a mean score less than 2.5 would mean that the respondents agree with the statements. All teachers were in agreement with all the statements had means below 2.5. From these findings therefore, it can be evidently concluded that deviation from canonical word order, limited breadth and depth of lexical knowledge pose a challenge in mastery of appropriate sentence structure in written English grammar by learners who are deaf. Syntactical grammatical errors ranging from incorrect word order, omission of English grammar articles, multiple misspelled words and writing entire words or sentences in capital letters. The current findings are in concurrence with Ogada (2012), Power (2002) and Traxler (2000) who established that learners who are deaf had challenges in mastery of expressive written English grammar. However, the current study shows effect of Kenyan Sign Language on specific syntactical pattern of Written English grammar by primary school learners who are deaf. Results from this study indicate that lack of mastery of correct syntactical pattern in written grammar is a contributing factor to low academic performance in written English grammar by learners who are deaf at Kenya Certificate of Primary Education terminal examination in Nakuru Region, Kenya.

#### **4. Conclusions and Recommendations**

##### **4.1 Conclusions**

Based on findings of the study, It can be concluded that KSL transcription had effect on syntax of written English by deaf children Written English work of learners who are deaf had errors in canonical word order, Object/Subject/Verb (OSV) which is basically KSL basic word order was commonly written instead of Subject/Verb/Object(SVO) which is written English basic word order. This was considered major factors that contributed to low academic achievement by deaf learners in written English grammar.

##### **4.2 Recommendations**

Bilingual approach where KSL is used for face to face communication for explanations of concepts and written English is used on the chalk board should be used to instruct deaf learners.

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