Interpretations of English Nominal Elements by Kamba Speakers in Kenya

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Abstract: **Language principles are innate and all human beings are endowed with such ability to acquire and be competent in any human language. Notably, there are subtle variations in languages occasioned by its morphological property. As such, once morphological units have been acquired the language principles work naturally in constraining the language use. Some of the language principles which are innate and part of adult syntactic knowledge are the binding theory principles. Binding theory constrains the use of NPs in languages; there are asymmetrical results, however, on binding theory based research on knowledge of the binding principles among young children cross-linguistically see (Mustafawi & Mahfoudhi, 2005). To investigate the innateness of binding principles among L2 learners; the current study looked at Kenyan form one students who have studied English nominal elements for more than seven years. The aim was to describe knowledge in nominal elements and how the students subconsciously interpret and use the binding principles as guided by the innate linguistic ability. Judgment test was used to elicit data from two different schools an experimental and a controlled one. The experimental school had studied a recommended class reader where an extract was lifted and students given seventeen test questions on nominal elements. Students were also given fifty questions on match and mismatch binding theory sentences (BT sentences hence forth) for interpretation. Lastly, the students wrote essays where BT sentences were extracted from their essays for judgment. Both phrase markers and descriptive statistics were used to analyze the data. An Analysis of Variance (ANOVA) was carried to point out any significance difference in interpretation of the nominal elements within and between the two groups. The abstract linguistic ability among the form one students was evident from the students' use of nominal elements in spontaneous essay writing where 70% use of BT sentences was grammatical. Comprehensional skills which precede production skills lead to below chance in identification of nominal elements in context and interpretation of both match and mismatch nominal items in the BT sentences.**

Key words: **Nominal Elements, BT sentences, co-reference, disjointed, ANOVA.**

I. INTRODUCTION

Binding theory deals with how the various nominal elements in a syntactic unit such as the lexical anaphors, traces, null pronouns and full nouns are interpreted in relation to the antecedents that bind them. It interacts with other modules of grammar to achieve grammatical convergence which is a significance human knowledge. The Projection Principle (PP) and Extended Projection Principle (EPP) require lexical information presented in a syntactic structure as a conventional property. Among the lexical elements making a syntactic structure are the nominal elements. Grammar according to Chomsky (1986a) under government and binding theory is divided into what he calls modules that check certain features by introducing constraints (as cited by Cook & Newson, 2007:62). The specific module of grammar that places these constraints on nominal elements is the binding theory. The existing way of using and interpreting Noun Phrases (NPs) is the idea behind binding.

This theory is divided into three principles; the first principle A regulates uses of anaphors. English language, principle A constrains anaphors to be bound within the local- domain which is the minimum clause. Parametrically, other languages such the Dholuo language binds its anaphors within the word (Onyango, 2013) while Chinese language has variants of anaphors some binding locally (ziji) while others non-locally (taziji) (Mustafawi & Mahfoudhi, 2005). The second principle B constrains pronominal to be bound non-locally in English language; parametrically, other languages such as Dholuo binds pronominal within the word (Onyango, 2013) and (Madara, 1989). The third principle C regulates full-nouns that are never bound anywhere, parametrically, a language such as Vietnamese binds r-expressions (Fischer, 2004).

Syntactically the nominal elements have to appear in certain positions based on their referential features. Under binding we have the relationship of a binder and bindee in argument positions in case of anaphors. The binder is supposed to precede the bindee, since the later depends on former in the sentence. The relationship is based on Constituent Command, in which the binder c-commands the bindee.

In English binding is guided by notion of domain. Anaphors are bound within a local domain, where there is antecedent, a governor and the anaphor. The governor gives semantic roles to the argument as well as checks the case features. Pronominal are bound outside this binding domain, technically they are not C-commanded by their antecedents. The reason is that pronominal can optionally have an antecedent within or without the sentence. Syntactically, r-expressions are not bound at all since they have real examples from the discourse of universe. The binding domain is popularly the Governing Category (GC), which could be a clause or a complement. The threshold of a GC is a subject, a governor and the bindee.

Antecedent C-commands its Anaphor

[Syntax tree diagram: IP branching to DP and I'. DP dominates a triangle over Kemau$_i$. I' branches to I and VP. I dominates [-ed]. VP dominates V'. V' branches to V and NP. V dominates Congratulate. NP dominates a triangle over himself$_i$.]

[IP Kemau$_i$ congratulated himself$_i$]

Kemau$_i$ — Antecedent/binder

himself$_i$ — anaphor/bindee

Semantic interpretation must follow the syntactic representation; indices are used to represent references of nominal elements under binding. Common indices indicate co reference while the opposite indicate disjoint reference. Anaphors in local domain are interpreted as under co reference with the antecedent while those in non-finite clauses are interpreted as bound from the upper clause. Pronominal are interpreted as being in complementary distribution with the anaphors save of those under exempt category. Since r-expression are free everywhere are never interpreted in reference to any element within any domain. Apparently, sentences become ungrammatical if binding and co reference crashes.

Examining closely most of the cross-linguistic studies point out knowledge of principle A save of cases where domain extension is required such as cases of Exceptional Case Marking (ECM) and complements which are termed as argument by themselves. On a glaring contrast lack of knowledge on principle B is witnessed cross-linguistically; this has also lead to conclusion on low performance on principle C, (Grimshaw & Rosen, 1990:187). The inconclusive position is been associated with delayed development of some principles. (Borer & Wexler, 1987) suggest that principle B/C matures later than principle A; the later turns to be unmarked part of the UG among the children (Hendriks & Spenader, 2005). Such asymmetrical position contrary to UG innate endowment makes the study important.

The Subset hypothesis of parameter setting which observes the beginning from unmarked to marked makes (Wexler & Manzini, 1987) suggest low performance of Principle B/C. There is the feeling that children begin from known to unknown which in essence would contradict the Chomskyan innate endowment structure of UG as well as the Lexical Learning Hypothesis(LLH) by (Wexler & Chien, 1985). Pragmatic principle P by (Chien & Wexler, 1987) suggests that children lack the pragmatic knowledge to choose an appropriate antecedent for the pronominal and more often give local binding as an alternative.

From the perspective of language use, learners who have linguistic knowledge of grammar are able to use and interpret its phrases and sentences. The main questions of the study are: What is the linguistic knowledge of English nominal elements by form one students? Further, what is the interpretational knowledge of English nominal elements by students in form one? As well as what are the possible challenges students in form one face when using English nominal elements? The interest in the study is that nominal elements makes great part of lexical items taught in both primary schools and high schools as well as in higher institutions teaching languages; an insight on knowledge of these syntactic principles cannot be overemphasized for both pedagogy and andragogy purposes. It will be also possible to make inference on the lexical learning hypothesis that only lexical items are learnt but principles are unlearned. Not the least it is an additional knowledge to the pool of research.

II. METHODOLOGY

Descriptive survey design was deemed most appropriate for our study; basically descriptive research helps in learning more from a multitude of subjects by just testing a sample of such large population and subsequently generalizing the results. The purpose of such design is to describe the situation

as it is without interfering or changing anything (Hedrick, T.E et al., 1993).

Population of the study

Our target population was form one students from Kamba speakers of English who have covered form one English syllabus in Kitui County-Nairobi Kenya. This is a kind of population that has undergone eight years of primary education and has studied lexical information just to mention traditionally what is called parts of speech and of interest, the nouns, noun phrases, pronouns: reflexives and reciprocals, personal pronouns, possessive pronouns among other syntactic units.

Sampling Techniques and Sample Size

A probabilistic sampling technique was used in this research that the whole population had a chance to be selected randomly during the selection of samples from the written test sheets. In our experimental school, the form one class had sixty students, twenty eight boys and thirty two girls; the entire class was given the set test and as well as a topic to write an essay subsequently a systematic random technique was used to select samples from the written test. Our required sample size of the written test was thirty samples. From a class list of boys and girls we divided the total number by two and randomly every second (2nd) paper (written exam) was picked.

Thirty two written test from the girls' category: 32/16= 2nd

Every second paper in the list is going to be picked for data analysis.

Twenty eight written test from the boys' category: 28/14= 2nd

As well every second paper in the list of boys is picked.

Our sample size was then thirty written exams and thirty essays from the subjects. This procedure was repeated with the controlled school to get another sample of 30 scripts for analysis purposes. In total we had 120 scripts to analyze the interpretation of nominal elements since each school had 30 scripts for test exam and 30 scripts from written essays.

III. DISCUSSION OF FINDINGS AND RESULTS

Knowledge in Nominal Elements

Nominal elements are the English NPs regulated by the binding theory principles as far as the distribution in the sentence is concerned. Binding theory recognizes three types of overt nominal-element, however, a non-overt NP is also considered when analyzed based on componential features (Haegeman, 1994). Studied in high school syllabus as types of pronouns are the reflexives; which are subdivided into reflexives and reciprocals and termed as anaphors are given the componential features of (+anaphor,-pronominal). Pronominal are given the componential features of (–anaphors, +pronominal). They do not independently select their referent from the universe of discourse. This is the

category that morphologically realizes English case; categorized under case theory as nominative, accusative and genitive, distinguishing gender, person and number.

The third category is usually given the componential features: (-anaphors, -pronominal). This category has real referent from the universe of discourse, known entities. These include proper nouns and definite nouns viz: Hilda, John, the man, the car, the huge bird, the island in the coast of Kenya etc. Because of their inherent property they can select a referent thus given the name referential expressions. Linguistic knowledge of referential properties requires clear demarcation of nominal-elements into various classes; our first objective was to test linguistic knowledge of these syntactic units among our subjects viz: full nouns, pronominal and anaphors.

According to (Carnie, 2000), the nouns that end with –self a singular suffix and changes to –selves in plural by addition of a sibilant suffix, such as themselves, itself, herself, himself etc. are known as reflexives together with reciprocals such as each other, one another are termed as anaphors, (p7). (Quirk et al., 1985), categorize both pronominal and reflexive under what they call, the Central pronouns. The pronominal and reflexives are said to have morphological characteristics which the r-expressions lack. These morphological features include case. Notably the pronouns contrast morphological case of subjective and objective distinct from abstract case seen in r-expressions. Secondly, the pronouns contrast the features of person, gender and number.

Morphological Features of Personal, Possessive and Reflexive Pronouns

	Personal pronoun		Reflexive pronouns	Possessive pronouns	
	Subjective	Objective		Determinative function	Independent function
1st person					
Singular	I	Me	Myself	My	Mine
Plural	We	Us	Ourselves	Our	Ours
2nd person					
Singular	You	You	Yourself	Your	Yours
Plural	You	You	Yourselves	Your	Yours
3rd					
Sing. Masculine	He	Him	Himself	His	His
Sing. Feminine	She	Her	Herself	Her	Hers
Singular non personal	It	It	Itself	Its	
Plural	They	Them	Themselves	Their	Theirs

(Quirk et al., 1985:345)

Subclasses of pronouns
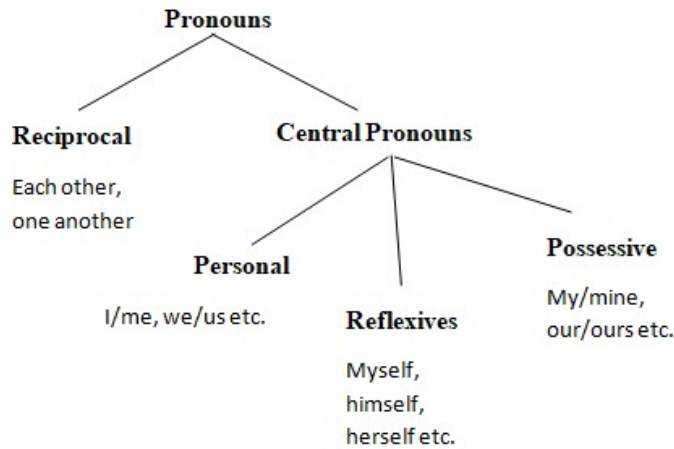
Quirk et al., 1985:345)

Reciprocals are inherently plural, they are said to express two way reflexive relationships unlike the reflexives. Possessives are categorized into determinative set and those indicating independent NPs. The lexical information is such important in our study since the other two objectives are based on whether the subjects have such information in their lexicon, the mental dictionary.

There were seventeen test questions, where subjects were supposed to respond to questions testing on knowledge in nominal elements. The performance shows that both the schools scored below chance, below 50% at 34% percentage experimental school and 42% controlled school respectively as shown on the bar graph below. Experimental school had a mean score of 5.167 and a standard deviation of 3.219 their performance ranged between 2marks and 8marks with 90% of the scores lying around the mean going by Chebysher's theorem that why the percentage score was far below half. Similarly, the controlled school mean was 6.833 and a standard deviation of 4.375 a percentage pass of 42%. The performance was more spread than was with the experimental school; their performance ranged between slight above 2marks and 11marks. However, 94% of the scores lied around the mean, which was below half.

To compare if there was any significance difference in the performance of the two schools we used ANOVA (Analysis of Variance) to determine any significance difference in the subjects' means. The significance value helped to gauge if the independent value (IV) had any effect on the performance on lexical items for those who had read the class reader and those who did not. There was no significant effect of abstract linguistic knowledge on performance in lexical elements at p<.05 level for students who had read the class reader and those who had not f (1,58) = 0.59, P = 0.4462. The condition of reading the class reader did not make any difference in knowledge of lexical items since the lexical are learnt while the principles are innate and endowed to each human mind. The below chance level is associated with the performance factors.

Performance on nominal elements percentage passes just below chance level.
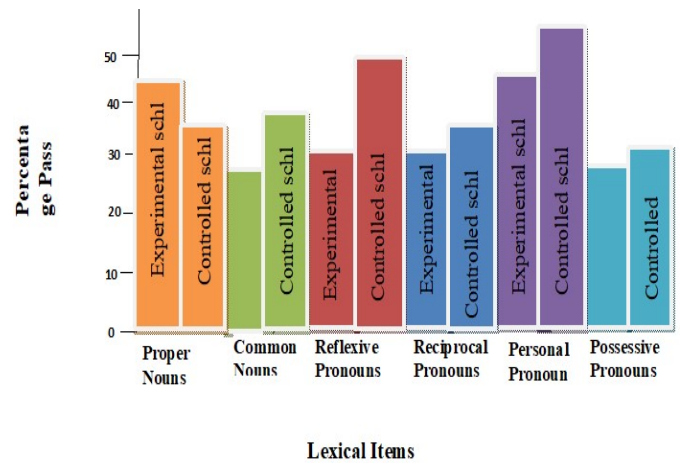
ANOVA Table on Nominal Elements/Lexical Items Performance

Source	Sum of squares (ss)	Df	Mean of squares (ms)	F	Prob›f
Between groups	8.816667	1	8.816667	0.59	0.4462
Within groups	869.3667	58	14.98908		
Total	878.1833	59	14.88446		

interpretations of Anaphora sentences

The interpretation is based on the principles of binding. Binding theory recognizes three main principles which determine the distribution of various NPs according to the PP and EPP in GB. The first principle is called Principle A which deals with interpretation of the anaphors. According to (Cook & Newson, 2007), "An anaphor must be bound within its governing category", the governing category is further defined as the minimal clause which contains the anaphor's subject/antecedent and its governor. The minimal clause basically is an IP (inflectional phrase) or NP complement (Haegeman, 1994). The minimal clause could be a finite clause or non-finite clause; the former is usually a Complete Functional Category (CFC), that is, the clause has a governor which case markers both the internal and external argument and also meets the theta grid requirement by assigning theta roles to the arguments as well as checking the referential features. Non-finite clauses lack the governor due to absence of TENSE and AGR (agreement) features.

Binding is both co- indexation and C-command. The former is semantic part of binding theory coming into play with the later which is the syntactic part of it. In this case the reflexive gets their meaning by co- indexing with another NP (antecedent) in the clause IP/NP complement. The binder (subject/antecedent) must do the C-commanding of the bindee (reflexive in this case) and not the reverse. C-command is the

syntactic representation of the relationship of the two NPs. Traditionally, NPs in co reference are represented with subscript index [i] while those disjointed get difference indices after alphabetical letter [i].

The C-command has been defined as follows:

A node A c-commands node B if;

A does not dominate B,

B does not dominate A and

The first branching node dominating A dominates B. (Haegeman, 1994:212)

There were twenty four (24) questions on anaphora sentences; the following table shows percentage distribution on anaphora sentences interpretation as per principle A.

Interpretation of anaphora sentences Experimental and the controlled school.

Clause type	Experimental school			Controlled school		
	Total Marks	Actual Score	% Pass	Total Marks	Actual Score	% Pass
C-command in reflexives	30	10	34%	30	8	27%
Local Domain	120	54	45%	120	53	44%
'SUBJECT' as a governor	30	19	64%	30	13	43%
Non-finite clauses	30	16	54%	30	16	54%
Domain Extension	30	19	64%	30	11	37%
Reciprocals	60	40	67%	60	25	42%
Embedded Clauses	120	46	39%	120	31	26%
Prepositions subcategorized by verbs and binding of reflexives	60	37	62%	60	15	25%
Reflexives and Number	30	21	70%	30	20	67%
Reflexives and Gender	90	58	65%	90	39	43%
PP adjuncts of location/direction and binding of reflexives	90	44	49%	90	24	27%
Definite NPs as potential binders	30	19	64%	30	16	53%
	720/12 = 60	383/12 = 32	677/12 = 56.42	720/12 = 60	271/12 = 22.58	487/12 = 40.58

On C-command as seen above, only 34% and 27% in the experimental and controlled school respectively gave the correct interpretation. The reflexive c-commands its antecedent violating the principle A that reflexives depends on its antecedent for meaning. Out of the four questions testing on local domain, knowledge of the governing category of the 60 sampled scripts of both schools only 45% and 44% respectively gave the correct interpretation. As noted, non-finite clauses lacks a governor at its local domain; slightly above half gave the correct interpretation which is within chance level at 54% and 53% respectively. In absence of physical subject in both non-finite clause and the NP complement above could have been a challenge since the subjects managed slightly above chance level at 54% and 64% respectively. The only difference is that reciprocals are inherently plural; the interpretation was however, slightly above chance at 67% and 42% respectively. In presence of an intervening antecedent the nearest antecedent binds the reflexives due to minimal domain; testing such interpretation we noted that the score went down at 39% and 26% respectively. Interpretation of sentences with verbs that subcategorize for certain preposition gave varied results at 62% and 25% respectively. The interpretation on morphological features controlled sentences was higher at 65% and 70%.

Principle A and B are usually in complementary distribution thus where principle A is permissible principle B is not possible. However, the PP adjuncts of location and direction in the theta grid allow both principle A and B. This has been termed as breaking down the binding principles algorithms (Reinhart & Reuland, 1993:661). The argument goes that if the anaphora and its antecedent are co-arguments principle A will hold, a complementary distribution. However, the locative PPs which are adjuncts create also another local GC just like tensed embedded clauses in the matrix clause. The local GC is free of binding to pronominal which can bind the antecedent at the [IP] yet the anaphor lacks its antecedent at the adjunct leads to domain extension, binds and co indexed with the same antecedent at the [IP] breaking down the complementary distribution. This is the same argument with the possessive pronouns, definite NPs and picture anaphors. This is where term exempt anaphors comes from.

[John Benjamin$_i$ saw the police behind himself$_i$/him$_i$]

The percentage pass on exempt anaphors were 49% and 27% respectively. The general percentage score on interpretation of anaphors by experimental school was around the chance at 56% while that of the controlled was below the chance level at 41% as seen above. When we used ANOVA to determine any significance difference in the two groups, it was realized that there was a significance difference. "There was a significance effect of linguistic knowledge on interpretation of anaphora sentence by students in experimental school and students in the controlled school [f(1,58)=9.94 , p =0.006]. This difference is attributed to the fact that experimental school had read the class reader thus their anaphora sentence interpretation was around chance while the controlled school had not read the class reader their anaphora sentence interpretation was below chance level.

The ANOVA Table on Anaphor Interpretation

Source	Sum of squares (ss)	Df	Mean of squares (ms)	F	Prob›f
Between groups	170.0167	1	170.0167	9.94	0.0026xx
Within groups	992.1667	58	17.10632		
Total	1162.183	59	19.69802		

Iinterpretations of pronominal sentences

Principle B requires the pronominal to be free within its GC. Subjects with knowledge in BT due to innate endowment of UG will subconsciously interpret BT clauses of pronominal differently from those of reflexives. Evidence of treating pronominal different from anaphors according to (Grimshaw & Rosen, 1990) is an indication of knowledge in binding theory. This means they will bind anaphors locally but allow long distance binding of the pronominal. Pronominal are not locally bound. Twenty three questions were subjected to the students replacing anaphors in the BT sentences:

Percentage Performance in Pronominal Interpretation School A and B

Clause Type	Total Marks	Experimental School		Controlled school	
		Actual Score	% Pass	Actual Score	% Pass
Pronominal in local domain	210	113	54%	84	40%
Pronominal at long distance	300	171	57%	130	43.33%
PP subcategorized by VP	60	36	60%	23	38.33%
PP adjuncts of direction and location	90	51	57%	35	38.89%
	660/4 = 165	371/4= 93	57%	238/4= 60	47.43%

Similarly, we used ANOVA to determine any significance difference in interpretation of pronominal by the two schools a shown in the percentages table above the score was around

chance level at 57% and 47%. Just like interpretation of anaphora sentences, there was difference in interpretation of pronominal sentences between the two groups. [f(1,58)=19.59, p=0.000].

The ANOVA Table on Pronominal Interpretation

Source	Sum of squares (ss)	Df	Mean of squares (ms)	F	Prob›f
Between groups	248.0667	1	248.0667	19.59	0.000xx
Within groups	734.2667	58	12.6597701		
Total	982.3333	59	16.6497175		

Interpretations of R-expressions

R-expressions are never bound anywhere in the sentence. These NPs have real entities in the discourse of the universe. The subjects were presented with four clauses involving r-expressions. Since r-expressions are not bound anywhere in the clause; the subjects were expected not to bind them; only 7 subjects did not bind the r-expressions out 30 scripts sampled in each school. We can technically say those students who displayed knowledge in principle C are only 7 out of possible 60 student sampled representing a percentage of 11.67%. However, from the corpora the percentage score was 54% and 45% in overall since some would bind and unbind others.

John told John that they had to leave.

There was no significance difference in performance on r-expression on the two groups. There was glaring absence of r-expressions sentences among form one students, when ANOVA was used to determine difference in performance; it was found that there was no significance difference as follows.[f(1,58)=1.23, P=0.2717]

The ANOVA Table on R-expression Interpretation

Source	Sum of squares (ss)	Df	Mean of squares (ms)	F	Prob›F
Between groups	2.016667	1	2.016667	1.23	0.2717
Within groups	94.96667	58	1.637356		
Total	96.98333	59	1.643785		

Use of anaphors in essays

The last objective, three, was made to evaluate the use of nominal elements by students in form one in sentences. According to (Haegeman, 1994), binding theory is the module of grammar responsible for interpretation of various NPs in GB. Interpretation has to do with knowledge of the various NPs, Semantic meaning in co reference and syntactic distribution in the clause that is the syntactic use in the sentences. The distribution is constraint by the three binding principles. To achieve this, we subjected the students to writing essays then the researcher extracting BT grammatical

and BT ungrammatical to make judgment on knowledge in nominal use.

We had two types of essay writing; a proverb "Charity Begins at Home" and a picture composition. We noted that subjects were using pronouncedly BT sentences in the picture/ descriptive compositions. We randomly selected 60 scripts, 30 from each school for our analysis. There were 30 BT sentences in total on anaphors from the 60 sampled scripts; 21 of them were BT grammatical while the other 9 were BT ungrammatical. 12 out of the 21 BT grammatical are simple BT sentences, the antecedent were in co argument with the reflexives; they were in respective clause mate condition. Such sentences obeyed principle A; the anaphors are bound within the GC. There was only one infinitival clause in nature leading to domain extension. Only two of the BT sentences were matrix; we noted that the subjects avoided matrix sentences. One of the two matrix sentences used was BT ungrammatical due to number and gender features of pronouns. The only BT sentence using reciprocal was ungrammatical

Percentage use of Anaphors in BT sentences

No. Sampled scripts	% use of BT sentences	% BT grammatical	% BT ungrammatical
60	30	70	30

Use of pronominal in essays

We further analyzed the same 60 scripts out possible 130 written essays to evaluate the use of pronominal by the subjects so that we could make a judgment whether the subjects have knowledge in pronominal use or not. In both schools 225 both BT grammatical and BT ungrammatical sentences were picked from the written essays. There were 167 BT grammatical sentences while the remaining 58 were BT ungrammatical. This translated to 74% on BT grammatical use and 25% on BT ungrammatical.

Percentage use of pronominal in sentences

Total Clauses	BT Grammatical	BT Ungrammatical	% BT Grammatical	% BT Ungrammatical
225	167	58	74.22%	25.78%

The BT grammatical were composed of distance binding of pronominal, local GC created in possessive pronouns and definite NPs. It is noted that out of 58 BT ungrammatical 43 of them are matrix sentences while only 15 BT ungrammatical are simple clauses. The mode of low performance was on Matrix sentences compared to simple sentences.(Bloom et al., 1994) observes that children demonstrate knowledge in first person pronouns such as I, me and myself compared to third person pronouns such as she, her, him and himself etc which to them are ambiguous. Further, they say children are easily confused by matrix sentences involving binding on pronouns.

There was high percentage of BT ungrammatical on matrix sentences vis-à-vis simple sentences. Forty three sentences being matrix sentences translating to 74.14% while fifteen being simple sentences making 25.86%.

Use of R-expression in essays

On glaring evidence out of the sixty sampled scripts there was hardly any r-expression sentences found. This shows students do not use r-expressions in discourse; this reflects the fact only 12% in both experimental and controlled schools knew that r-expressions are never bound anywhere.

IV. SUMMARY, CONCLUSION AND FURTHER ISSUES

The performance in the nominal elements was below chance level which cast doubt whether the subjects have in place the abstract linguistic principles. Notwithstanding, some recent researchers on lexical knowledge such as (Musyoka, 2015)studying knowledge on choice of preposition found relatively similar results she says, '50% of the subjects only relied on guesswork on the choice of the preposition to use'. These were form three students from extra- county schools in Machakos County-Kenya.

In our study we found out that only 34% and 42% in the experimental and controlled schools respectively of the sampled population could identify correctly the various lexical elements from the given text. The subjects had challenge identifying lexical items from the given text. As mentioned above, the performance lied below 50%. Our ANOVA analysis found out that there was no significant difference in their means performances. This means students need to learn various lexical elements for them to perform well in any given test going by the Lexical Learning Hypothesis (LLH). Our study found that students' interpretation on anaphora sentences had significant effect when ANOVA was used .This was attributed to the fact that experimental school had studied the class reader where the text was lifted besides their score being within chance level at 56% experimental school and 40% controlled school.

Interpretation of pronominal sentences was at 57% slightly higher with one point from interpretation of anaphora sentences at 56%.This is still slightly above chance level (50%), the interpretation of the pronominal sentences in controlled school showed similar results with that of experimental school though lower than chance level at 41% and 40% respectively. This underscored the chance level performances. There was significant effect of those who had read the class reader and those who had not on pronominal interpretation from ANOVA analysis. Our findings show that form one students perform better in pronominal interpretation statistically with significant effect on anaphora interpretation; this could be attributed to better maturation process which is cited as challenge to young children below 8years. As discussed in the literature review low performance among the children in principle B makes researchers conclude that children perform poorly in principle C. Nevertheless, this

seems to be reflected in our study. Out of the possible 60 sampled scripts, only 7 scripts were found to have rejected binding of r-expressions translating to only 12%. There was no significant difference in interpretation of r-expressions when ANOVA was used.

According to (Bloom et al., 1994), comprehension could precede production by far; that why Chomsky's' idea of competence vis-à-vis performance. This line of finding seems to match our findings on use of the nominal elements in spontaneous writing. The use of grammatical anaphora and pronominal sentences syntactically was far above chance 70% and above. This was different from the interpretation of the same clauses or even the identification of the nominal elements from the predetermined text and questions. We conclude that the use of the nominal elements especially the reflexive sentences and pronominal sentences align themselves with UG theory by Chomsky which gives that human beings have innate endowment of the linguistic principles and that languages have underlying parameters basically on the lexical morphology. The morphological difference is the reason behind chance performance for the former.

Kenya has more than 42 speech communities various studies can be carried out on various local languages to determine certain parameters. English do not allow binding of r-expression but a language like Vietnamese does-study can be carried on local languages to determine any existing parameters. Our study looked at two sub county schools since they are the majority in the country other studies can be done on various school categories to determine knowledge of the binding principles from a more inclusive categories. Sex variable has be a concern in language acquisition where the sex of the learner determine their language competence, study can be done on various sex to find any significant effect on binding and co reference knowledge.

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