The use of Lexical Cohesion in the English written texts of Hearing Impaired High Students

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ABSTRACT: The purpose of this research was to describe and classify the lexical cohesive devices used by hearing-impaired learners to achieve cohesion in their written texts. Most of the studies done on cohesion have concentrated on written texts by normal hearing learners. A study of how the hearing impaired learners write cohesively would be useful. The data for the study was collected from the written texts of hearing-impaired students from selected High Schools in Kenya. The tools for data collection consisted of free composition and three written assignments by the hearing impaired learners. The study was guided by Halliday and Hasan's (1976) Model of Cohesion to identify, describe and categorize lexical cohesive devices in the written texts. The findings of this study indicate that the HI (Hearing-impaired)learners used lexical cohesive devices. Reiteration was the most prominent cohesive device used. The findings of this study will provide a theory governed description of the lexical cohesive ties used by the hearing impaired learners in Kenya. The findings will also contribute to the increasing body of knowledge in studies related to Discourse Analysis and writing of the hearing impaired learners. The study will be useful to teachers, researchers, the Kenya Institute of Curriculum Development and the Ministry of Education in formulation of future educational policies regarding the education of the hearing-impaired learners in Kenya.

Keywords: Cohesive devices, Lexical cohesion, tie, hearing-impaired learners

I. INTRODUCTION

English is an important language in Kenya and plays a big role in the Kenyan language scene. It is one of the three official languages, the others being Kiswahili and Kenya Sign Language. It is the language of instruction in the school system and also used in a large segment of the mass media. It is also the pre-eminent language of international communication (K.I.E, 2006). The English language syllabus for secondary education in Kenya aims at learners achieving communicative competence in both spoken and written English by the end of Form Four (KIE 2006). All learners are required to have acquired sufficient command of English in both spoken and written forms through the language skills of speaking listening, writing and reading.

Competence in both spoken and written English is very important for all learners regardless of their hearing ability. For the hearing impaired to benefit from education, they too, like all the other Kenyans of sound hearing, need to be proficient in English. It has however been noted that most deaf learners lag behind their hearing counterparts in literacy skills (Kuntze, Golo, & Enns, 2014; Kyle & Harris, 2011). The hearing impaired lag behind their normal-hearing peers (Wilbur, 2000; Luckner & Handley, 2008; KNEC, 2011; Webster, 2017).

20% of the hearing impaired leave school semi-literate regardless of the communication approach used (Marschark, Lang & Albertini, 2002; Webster, 2017). They encounter literacy problems and deficiencies in writing because of their delayed language development (Antia, Reed & Kreimeyer, 2005). However, the HI learners who acquire sign language from birth are able to converse and access knowledge about their environment (Aura, Venville, & Marais, 2016). Acquiring sign language creates an avenue for the acquisition of other languages such as English.

Although several studies have shown that the English writing skills of deaf individuals are usually inferior to those of normal-hearing peers (Wamae, 2003; Antia, Reed & Kreimeyer, 2005; Kuntze, Golo, & Enns, 2014), there is a need for information on the exact nature of their difficulties and of the effects of different linguistic elements on writing success (Paul 2010). A study on how the hearing impaired learners compose their texts cohesively will add more knowledge to their language acquisition as well as use. In this paper, the researcher examines how the hearing impaired learners use lexical cohesive devices in their writing.

1.1 The Concept of Cohesion

Cohesion is concerned with the ways in which the components of a text are mutually connected within a sequence, and it is crucial in the identification of what does and does not constitute a text (Halliday and Hasan 1976). According to Halliday and Hasan (2013), cohesion refers to the range of grammatical and lexical possibilities that exist for linking an element of language with what has gone before or what follows in a text. They add further that the linking is achieved through relations of meaning that exist within and across clauses or sentences.

Cohesion occurs where the interpretation of some element in a text is dependent on that of another. The one presupposes the other, in the sense that it cannot be effectively decoded except by recourse to it (Halliday and Hasan, 2013:4). It is achieved through the use of cohesive devices which Halliday and Hasan (2013:3) refer to as "ties". A tie is a single instance of cohesion, a term for one occurrence of a pair of cohesive devices.

Grammatical cohesion is achieved through reference, substitution, ellipsis, conjunction. Lexical cohesion is achieved through reiteration and collocation. Reiteration creates cohesion when an item is repeated later in the text as the same word, a synonym or a new synonym of the referent, superordinate or a general word. Collocation is the inclusion of two or more words that are likely to occur within the same context. It creates cohesion through the association of lexical items that regularly co-occur (Hellalet, 2013).

1.2 Model of Cohesion

The study was based on Halliday and Hasan Cohesion Model. Halliday and Hasan model of cohesion has the ability to analyze the texts delicately. The chief tenet of cohesion as argued by Halliday and Hasan (1976 & 2013) is the way the elements within a text depend on each other for their interpretation. This model perceives a text as having reference, substitution, ellipsis, conjunction, and lexical organization devices through which cohesion is realized. Accordingly, a single instance of cohesion is marked by the occurrence of a pair of cohesively related items, which, it is argued, form a tie.

Lexical cohesion is achieved by selection of vocabulary. Lexical cohesion is achieved by the choice of words that a writer or a speaker uses. According to Halliday and Hasan (2013), lexical cohesion occurs when two lexical items in a text are related in meaning. Halliday and Hasan's model of cohesion gives two categories of lexical cohesion or lexical organization. These are reiteration and collocation. Reiteration involves the repetition of a lexical item, the use of synonyms or near-synonyms, the use of the superordinate term, and the use of a general word to refer to a lexical item. Collocation is the cohesive force that is contracted by any pair of lexical items whose meaning are related or association of lexical items that regularly co-occur.

II. MATERIAL AND METHODS

Descriptive research design was adopted for this study. This study was conducted in three schools located in three counties, namely; Ngala Special Secondary school in Nakuru, Muhoro Secondary school in Nyeri and Machakos School for the deaf in Machakos County. Purposive sampling was used to choose the three schools. The researcher used simple random sampling method to select a total of 80 students from the three schools. The researcher used raffle design or lottery design to do a simple random sampling method in each school. This gave each learner the same probability or an equal chance of inclusion in the sample. A free composition was given to each of the 80 students in the three selected schools. The researcher also picked two written essays per student from their earlier written composition assignments to capture normal English writing situations.

The researcher got research authorization from the National Council of Science and Technology (NACOSTI). The NACOSTI permit was used to get approval from county governments, county directors of education, and the principals of the three schools before commencing of data collection. The students were informed that the data being collected was intended for research only. The researcher assured the students of confidentiality through anonymity. The learners were given one hour to write the free composition entitled "My best day in School". The written assignments were picked and analyzed within the schools' premises.

2.1 Data Analysis Procedure

The analysis of data in this study entailed the following: identification and description of the grammatical and lexical features; determination of the prominent types of cohesion; analyze of the errors related to the use of cohesive devices and investigate the grammatical errors related to the cohesive devices in the hearing-impaired learners' written texts. The researcher read the two categories of data; free compositions and students' assignments written by the hearing impaired learners. All the sentences that contained Lexical cohesive ties were selected and coded according to the source. Sentences from the free composition category were coded as FCC while the students' assignments were coded as SAC. The researcher indicated the number of lexical cohesive devices contained in each of the selected sentences. The lexical cohesive item and type of

cohesion involved in each tie were specified. The analysis was presented in tables. Descriptive statistics were used to determine the frequency and percentage of the errors.

III.   RESULTS

3.1 Identification of lexical Ties

The two types of lexical cohesive devices posited by Halliday and Hasan (2013) were present in the writing of the hearing impaired learners. These devices varied depending on the text category (SAC-Student Assignment Category, FCC-Free Composition Category). As seen from the table, the hearing impaired learners used more reiteration than collocation.

Table 1 Frequency of Lexical Ties

Sub category	SAC	FCC	TOTAL
A. **Reiteration**			
Same word	96	72	168 (35.82%)
Synonymy	16	26	42 (8.96%)
Superordinate Term	10	9	19 (4.05%)
General Term	8	12	20 (4.26%)
A. **Collocation**	100	120	220 (46.91%)
Total	**230**	**239**	**469**

Example of FCC

[1]*Happiest day my life.*[2] *Friday party day good and Saturday no lesson.* [3]*All students happy.* [4]*We woke up and went school.* [5]*After school we went for party.* [6]*Then teacher buy cake.* [7]*Pastor come school motorcycle new.* [8]*Sing after eat cake after sing we eat cake.* [9]*The pastor pray preach then we eat.* [10]*Soon teacher take photos.* [11]*Students happy when music play students and dance.* [12] *Students dancing good music.* [13]*My happiest day was good.*

Example of SAC

The water and mineral salts which by drop from root and soils. The concerncent salt by leave had a water from temperature and carbon (iv) oxide. Then water had a salt from mineral drop move to the roots from by leaves had salt higher. The roots had a tree by leaves had a water salts and carbon (iv) oxide of concernation. To know how to do make salts move to the root later crop from mineral and leave then crop had a leave temperature which by salt of the air.

As seen from the above two examples, the hearing impaired written texts did not follow the normal English sentence structure and grammatical rules. All the examples given are lifted from the hearing impaired learners writing without correcting the grammatical errors. Most of the sentences lack grammatical functional words. There were also many spelling errors in the written texts. The research had to guess the meaning of particular 'words' from the context.

There are several lexical cohesive ties that the hearing impaired learner has used in the examples given. There is a repetition of the word ***party*** in sentence two and five; ***school*** in sentence ***four*** and ***five***; ***eat*** sentence ***seven*** and ***eight***; ***teach*** in sentence ***six*** and ***nine***; and ***students*** in sentence eleven. The noun phrase ***happiest day*** has been repeated in the first and in the last sentence. These repeated words create lexical cohesion within the text. There are also collocating words such as ***party*** and ***dance***; ***cake*** and ***party***; ***pastor*** and ***pray***; ***music*** and ***dance***; and ***students*** and ***school***.

3.2 Classification of Lexical Cohesive Ties

The lexical ties identified from the hearing impaired learners' free compositions and class assignments were classified using Halliday and Hasan (2013) Cohesion Model. As seen mentioned earlier, Halliday and Hassan classified lexical cohesion into two types, reiteration and collocation. Reiteration is a sub-category of lexical cohesion characterized by repetition, synonym, superordinate and general word (Halliday & Hassan 2013:279). In reiteration, the repeated word or lexical item shares a common referent with the original. Collocation, on the other hand, describes the relationship between words that co-occur or tend to co-occur. Below is the a discussion of the classification of lexical cohesive ties. All examples given are derived from the hearing impaired learners' English written texts.

3.2.1Reiteration

Reiteration involves the repetition of a lexical item, the use of synonyms or near-synonyms, the use of the superordinate term, and the use of a general word to refer to a lexical item (Halliday and Hasan (1976 & 2013). Same word reiteration had the highest frequency with 168 cohesive ties. Synonymy, superordinate term and the general term had 42, 19 and 20 respectively.

3.2.1.1 Same Word Repetition

Repetition refers to the use of the same word in a text repetitively (Halliday and Hasan (1976 & 2013). The hearing impaired learners frequently employed repetition in both the assignment and the free composition. The cause of the high frequency of same word repetition may be because of lack of substitute lexical items that could be used to replace words. The HI learners repeated keys words in every other sentence raising the frequency of lexical ties in the text significantly. The repetition may be as a result of insufficient vocabulary or even misapprehension. Examples of repetition subcategory usage have been given below.

Example 1: (from student Assignment)
The water and mineral salts which by drop from root and soils. The concerncent salt by leave had a water from temperature and carbon (iv) oxide. Then water had a salt from mineral drop move to the roots from by leaves had salt higher. The roots had a tree by leaves had a water salts and carbon (iv) oxide of concernation. To know how to do make salts move to the root later crop from mineral and leave then crop had a leave temperature which by salt of the air.

The question given to the learners was "*describe how water and mineral salts move from the roots to the leaves.*" Several keywords are used repetitively in example 1. These words *are water, salts, move, roots, carbon (iv) oxide, root, leaves and concernment (concentration).* These words have been repeated in every other sentence raising their frequency in the text significantly. These words were found repeated in all the text that the hearing impaired learners wrote. The repetition of the keywords in the topic in question in basically every sentence may be as a result of insufficient vocabulary or even misapprehension.

Example 2: (from student free composition)
*First one, some **students** were noticed a lot because the food were poor same waste time of money. Our class 3N have just one P.E for sports. Some **teachers** were lazy to teach us the same lessons. Many **students** want school uniform suffered and they steal to each other. Other things the dining hall that some **student** complained the group tables are poor because students were come late same food are few small and very poor. Many **students** are very sadness and hungry because they want the shopping in school and possible we pay for it. Other **students** in dormitory some are lazy to do your duty and ignored all the prefect to call his or her **students**. Some they steal their money from the **student** dormitory and they suffered a lot.*

The following words have been repeated in example 2: ***student, teacher, many students**, **dormitory***. The word ***student*** may have been repeated to give emphasis because the topic of the extract is about students. The word ***teacher*** has also been repeated either for emphasis or for lack of a substitute.

Example 3: (from student free composition)

*Our school is feel smart but one thing much take **teacher** think cloth only way encourage education. **Principal** go places have and **teacher** busy help **teacher** you lazy student only talk with take hope teach more not than **teacher** have much. **Principal** for you student yes obey true but **teacher** problem have which deaf for force who hear. **Student** shout much time long yes about give you miss information. Our **school** come here **teacher** time later for take think body rule feel a bad big much class my miss light make want mechain **teacher** come new here enter class teach sign language do not know true change deaf shoot feel unlike can have. Dining hall problem big have time save not. Because hope eat very bad very unlike food crown much out **teacher** see their feel good nothing true have. **Principal** any student sick have say ignore why student feel good not have think escape can think nothing have I will see **principal** with student go tourism do obey must be at place. Education encourage want can but teach good not feel unlike.*

Although the above text is incoherent, the hearing impaired learner has repeated the same words in their writing. Too much same word repetition may be monotonous, especially if the sentences are not well structured. This may be because the learner has not achieved enough lexico-semantic competence to use substitutes. Some of the words repeated such as *principal, teacher,* and *school,* help in creating cohesion in the text.

3.2.1.2 Synonymy and Near Synonyms

Synonyms are words with identical meaning (Halliday and Hasan, 2013). Near synonyms are words with meanings that are very closely related to the extent that they can refer to the same entity. When a synonym or near-synonym set are used in separate sentences, a cohesive relation is created. There were 16 and 26 synonyms in the student assignment and free composition respectively. This totals to 42, which translates to 8.96 % of the total lexical ties. Examples of cohesive ties are given below.

Example 4: (from student free composition)

My happiest day in life. It was a joyful day. Teachers did not come to class. Students listen music phone. We danced a lot because teacher was in office. She did not see phone at inspection. We eat bread and fruits. Students ate avocado and one loaf alone. We was happy.

Happiest and **joyful** have a similar meaning. The student made use of his lexical knowledge to avoid repetition.

Example 5: (from student free composition)

My happiest day I met a friend. She come from another school at drama festival. Jane is a very beautiful and friendly girl. My friend say this girl is pretty. She do KCSE exam this year.

Beautiful and *pretty* are synonyms and their use creates cohesion in the text.

Example 6: (from student assignment)

*When the osmosis is the water **move up** to the leaves and their functions of their plant soil. We learnt that the beginning of the xylem –**transports** water and mineral salts while phloem transports dissolved food substances. The soil water contains dissolved mineral salts which plants require for their growth and proper functioning. The concentration of the cell sap in the root hairs is greater than that in the soil. **Active transport** is involve substances known carrier. The mineral salts and water are **carried up** the stem into the leaves by a combination of cell processes which include osmosis, diffusion, root pressure, transpiration, cohesive force and capillary attraction.*

The words **move up**, **transport**, **carried up** and **active transport** are near synonyms. They express the same expanded meaning. This helps in enhancing cohesion within the text, despite the many grammatical errors present in the text.

3.2.1.3 General Term

The class of general term is a small set of nouns that have a generalized reference (Halliday and Hasan, 2013). Some of the words used were *humans* to represent *man*, *female*; *plants* to cover words like *trees*; *girl* to represent *Jane* as in example 47. There were a total of 20 lexical items used as general terms. This represents 4.26% of the total lexical cohesive ties in the current study. Some appear in the examples below.

Example 7: (from student assignment)

Jane is a very beautiful and friendly girl. My friend say this girl is pretty. She do KCSE exam this year.

The word **girl** is a general term referring to **Jane** in example 7, while **plant** is a general term for **a tree**. The general noun triggers a cohesive relationship between the two sentences in each of the above examples.

3.2.1.4 Superordinate Term

A superordinate term is a name for a more general class (Halliday and Hasan, 2013). A superordinate includes the meaning of other words. For example, *bird* is a superordinate term of *hen, weaver birds, and parrot* among other birds. These words are more specific. A superordinate term and a more specific member of a superordinate class are closely related in meaning. This relation is what brings about a cohesive tie when a superordinate term appears in a particular sentence, and a more specific member of the superordinate term appears in a particular sentence, and a more specific member of the superordinate class occurs in the surrounding sentences. Consider the following examples from the students' free composition and assignment.

Example 8: (from student assignment)

It was my birthday. I was very happy. Students in class were happy. The boys and girls sing happy birthday to me. I thank the students and they give me presents.

Boys and *girls* refer to the classmates of the writer. The word *student* is superordinate for *boy* and *girl*. This relationship creates cohesion within the text.

Example 9: (from student assignment)
Kenya, Uganda and Tanzania are friendly. These countries have trade. Good exchange in Kenya and Uganda. Business is good in East Africa. The countries are in East Africa.

Kenya, Uganda and Tanzania are countries. The word **country** is a superordinate term for the three names. This lexical relationship enhances cohesion in the text.

Example 10: (from student assignment)

We eat bread and fruits. Students ate avocado and one loaf alone. We was happy.

In the above text, *fruit* is a superordinate term for *avocado*. This relationship enhances cohesion in the text.

Example 11: (from student assignment)

The Maasai have cows, sheep and goats. They don't fear lion. They take cattle to the forest. There are leopards in the forest. They can eat the cattle. Any cow lost cannot be found. The animals kill them.

(The Maasai have cows, sheep and goats. They don't fear the lion. They take their cattle to the forest. There are leopards in the forest. They can eat the cattle. Any cow lost cannot be found. The animals kill them).

The superordinate term used is *animals and cattle*. The *animals* refer to wild animals that can eat the *cows, sheep* and *goats*. These are the lions and leopards. The noun *animal* is, therefore, a superordinate term for **lion** and **leopards** because they are all animals. The most appropriate term would have been **wild animals**. Similarly, the collective noun **cattle** is a superordinate term for **cows, goats and sheep**. The meaning relations between the above superordinate terms and the specific terms can be interpreted as belonging together.

3.2.2 Collocation

Collocation is defined by Halliday and Hasan (2013:285) as a lexical relationship 'between any part of lexical items that stand to each other in some recognizable lexico-semantic relation.' Collocation, therefore, takes place through association of lexical items that regularly co-occur. There were 220 collocation ties in the data analyzed in the current study, translating to 46.91% of the total lexical cohesive devices.

The hearing impaired learners used several collocating words and phrases in their writing to create cohesion. In this study, several words combinations that had high frequency were considered as well-formed collocation. For example, words like "*solution/water*" *dilutes/water/stem/roots*; *plants/cells*; *dance/happy*; *water vapor/water* and *eat/drink* were found to be collocative. In example 11 above, the word *lost* and *found* collocates - *Any cow lost cannot be found.* Other examples are given below.

Example 12: (from student assignment)
Trees need water and minerals. The mineral move from the soil to the root. The root carries the water to the stem and to the leaves.

The words *trees*, *roots*, *stem*, and *leaves* collocate. Roots are part of a *tree* and so do *stem* and *leaves*. The use of words that co-occur create cohesive links in the text.

Example 13: (from student assignment)
We place our books and pens on the table and ran to the dining hall. Dining hall plates and spoon were given. The food was sweet. We enjoyed delicious meal. Form one ate more food.

In the above example, the word *spoon* and *plate*, *books* and *pens*, and *food* and *meat* collocate. The collocating words create cohesive links in the text.

IV. DISCUSSION

As mentioned earlier, these two types of lexical cohesion were present in the hearing impaired data. Lexical ties are predominantly possible because the hearing impaired learners have not acquired or mastered other structures such as proforms, pronouns, conjunction and adverbs that would enable them to use other types of cohesive devices such as reference, conjunction and substitution and ellipsis.

The hearing-impaired learners used the same word or lexical item in a sentence and across sentences. Same word repetition is classified as complex lexical repetition or simple lexical repetition by Hoey (1991). The

hearing-impaired learners displayed both types of same word repetition as exemplified below. Simple lexical repetition involves the reiteration of the same word across sentences. The complex lexical repetition involves the use of two lexical items that are not identical but share a lexical morpheme.

Example 14: (from student assignment)
More water drawn into the root hair cells dilutes the cell sap making it less concentrated than that in the adjacent cell cortext cell of the root. Root take water stem leaves.

Example 15: (from student assignment)

The government raise tax workers for government develop
(The government raises tax for workers in order to develop)

Though the sentence is not grammatical, the learner has repeatedly used the word "root " in the sentences. The word *government* has been repeated too. The learner should have used a pronoun to substitute the word *government*. There was a high frequency of same word repetition in all the hearing impaired texts. The overuse of same word repetition may be as a result of the learners' lack of competence in the lexico-semantic relations. They didn't have a different word to substitute. The learners' lack of lexico-grammatical competence may have contributed to the high frequency of same word repetition. They lacked other words to use as substitutes as mentioned earlier.

Some of the 'same word' repetition was not classified under reiteration. This is because the hearing impaired learners carelessly repeated similar words immediately after another, forming strings of words that didn't make sense. The hearing impaired also repeated the same word in some cases due to the effect of Kenya sign language. Earlier studies indicate that in Kenya Sign Language, words are reduplicated to either mark plural or for emphasis (Mang'oka and Mutiti, 2013; Ayoo, 2004; Akachi, 1991). Mang'oka (2009) found out that the hearing impaired learners do not mark number in nouns. Instead, they repeat the same lexical item to indicate plural or emphasis. This reduplication of the same word is as a result of the lack of good mastery of lexical meaning. The reduplication enables the hearing impaired learners to express emphasis and plurality (Mang'oka, 2009:112).

Another reason for the high frequency of word reduplication may be as a result of lack of proper use of language mechanics. It was difficult to know where a sentence began and where it ended because some of the learners did not use full stops or commas. These findings agree with Kwan & Yunus (2014) who found out that learner of English as a second language learner faced a big challenge in lexical cohesion, especially in reiteration and collocation. Their study concluded that hearing-impaired learners had not yet mastered lexical cohesion. Other forms of reiteration were the use of "general term" superordinate term". A total of 20 general terms and 19 superordinate terms were used in the writing and the hearing impaired learners. Halliday and Hasan (2013) define the general term as "superordinate members of major lexical sets which operate anaphorically as a type of synonym (2013; 275). They argue that the general term in most cases has a determiner in a similar way to are reference item.

It should also be noted that some repetition took the forms of derivation; for example, *teach* and *teache*r, *run* and *runner*, *speak* and *speaker*, and *talk* and *talks* were found to be cohesive. These were taken as inflected forms of the same word, and therefore classified under repetition. These derivation elements were found to be cohesive. They created an extra-dimension of cohesion. There were a few examples of these types of cohesion as discussed earlier. Learners repeated these words extensively in their writing which ended up making some of the texts redundant and incomprehensible.

Other words used as a general term in this study were *human/man*; *plant/trees*; and *girl/Jane*. Superordinate terms were also used as potential cohesive devices under repetition. A superordinate term includes the meaning of other words. In this study '*fruit*' was used as a superordinate term for "*avocado*", *cattle for cows*, and *sheep and goats*. As mentioned earlier, there were several repetition errors as a result of the learners' lack of knowledge in lexical meaning. These led to meaning duplication errors where learners overused the same word in a sentence.

Another type of lexical cohesion was the use of synonyms or near-synonyms. Synonyms are words with identical meaning while near-synonyms are words with meaning that are closely related to the extent that they can refer to the same thing. Some of the synonyms used are words such as *strong/power*, *flaw/move*, *vessels/capillary*, *stream/water column*, *water pushed up/conduct water up*, *Transport /conduct water up* and *Food/meal*. The few learners who used the synonyms demonstrated an understanding of the relationship between words. However, most of the hearing impaired learners were unable to demonstrate a basic understanding of lexical –semantic competence.

Wolff (2011) claims that synonyms are more difficult than repetition. This is because synonyms are used in order to avoid unnecessary repetition of same words, or overusing of repetition. As a result of the hearing impaired learners' lack of adequate competence in meaning relationship, several of the words that they attempted using as synonyms were erroneous. The learners used words that had a similar meaning, but they did not know that it is not in all contexts that synonyms can be interchanged. Examples of words that are similar in meaning but differ in different linguistic environment are *run* and *moved*, *eat* and *swallow*, *large* and *big*.

The last subcategory of lexical cohesion is collocation. According to Halliday and Hasan (2013), collocations are "problematic part of Lexical cohesion (pg 284). The hearing-impaired learners used several collocating words and phrases in their writing to create cohesion. Collocation ties were the highest among the lexical cohesion. It is worth noting that the high frequency of collocation did not translate to quality writing. In fact, the sentences in most of the text were ungrammatical and poorly constructed. The use of words that co-occur in the current study did not translate to good composition on writing.

V. CONCLUSION

The study established that all the categories of Lexical cohesion as posited by Halliday and Hasan (1976) and Halliday and Hasan (2013) occur in the hearing impaired written text. However, the hearing impaired learners used more repetition than collocation. It was evident from their writing that they had not acquired enough lexical-semantic competence to write cohesively. The hearing-impaired learners carelessly repeated similar words immediately after another, forming strings of words that didn't make sense. The hearing impaired also repeated the same word in some cases due to the effect of Kenya sign language. Earlier studies indicate that in Kenya Sign Language, words are reduplicated to either mark plural or for emphasis. This reduplication of the same word is as a result of the lack of good mastery of lexical meaning). The study concludes that the hearing impaired learners need to be taught how to use parts of speech and grammatical rules to enable them write cohesively.

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