

## Lematic influence on vocabulary acquisition among L3 English language learners in Tanzania

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### ABSTRACT

This paper investigates cross-linguistic influence (CLI) on the acquisition of English vocabulary by third language (L3) learners in Tanzania. Specifically, the study aims to establish how lemmatic CLI from L1 and L2 influences L3 in a multilingual rural context where L1 is a dominant ethnic community language (*L1=Haya, L2=Swahili, L3=English*). Forty students whose L1 was Haya participated in the study. They performed three language tasks i.e., word association task (WAT), letter writing task (LWT), and wordless picture narration (WPN). Using the Parasitic model of L3 vocabulary acquisition (Hall & Ecke, 2003), the study found evidence of lemmatic transfer from background languages at form, frame and concept levels. More significantly, the L2 played instrumental and facilitative roles, both strategically and spontaneously, in influencing L3 vocabulary acquisition relative to the L1. In the bargain, the results show that the L2 is the predominant source language for lemmatic influence on L3 English and was modulated by proficiency and exposure. The study confirms that L3 learners reduce CLI as they increase L3 proficiency and that L2 acts as a filter for L2 features in L3.

**Keywords:** L3 vocabulary acquisition; lemmatic influence; lexical cross-linguistic influence; Tanzania; Swahili

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### INTRODUCTION

Third language (L3) acquisition is a relatively new paradigm in language acquisition research, which has inevitably attracted the attention of Second Language Acquisition (SLA) researchers. Several L3 researchers have attempted to highlight the influence of the first language (L1) and second language (L2) at the phonological level, lexical, and syntactical patterns on L3 acquisition. Besides, they have worked on associated factors and how the application of knowledge or elements of previously learned languages influences the acquisition a new language, in what is known as cross-linguistic influence (CLI) (Cenoz, 2003; Cenoz, 2013; Ortega, 2016). These researchers have explored the extent to which the previously acquired languages influenced

the new language (L3) acquisition. They have posited that L3 acquisition might depend on different factors other than the L2 factors, an argument that has subsequently become a fundamental concern in cross-linguistic influence (henceforth CLI) research. The term CLI was coined by Kellerman and Sharwood-Smith (1986). Since then, CLI in language acquisition has helped to describe phenomena such as linguistic interference, language transfer, borrowing and avoidance, the role of the mother-tongue, native language, and language mixing. However, none of these can be studied independently without reference to CLI (Cenoz, 2001).

Recent empirical studies on L3 acquisition have shown that previously acquired languages

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influence the acquisition of a new language in varying degrees (Cenoz, 2013; Hammarberg, 2010; Ionin et al., 2011; Jessner, 2008; Neuser, 2017; Ortega, 2008; 2016; Treicher et al., 2009; Wrembel, 2010). Moreover, they argue that the language influence in L3 can occur spontaneously or strategically to facilitate communication or the process of L3 acquisition. As a result, most L3 research has been limited to the complex and dynamic areas of L3 acquisition particularly the effect of L1 and L2 on third language acquisition; factors behind the choice of the source language in L3 acquisition; and how lexical CLI from previous acquired languages influence the target language.

Lexical CLI includes the transfer of an entire non-target word in the production of the target language, i.e. the influence of word knowledge in one language on a person's knowledge or use of words in another language. However, it not only focuses on non-target words but also on background knowledge a language learner possesses (De Angelis & Selinker, 2001; Jarvis & Pavlenko, 2008). The major reason that makes lexical CLI common is the learners who when learning the target language (L3) use concepts and semantic systems from their background languages (Ortega, 2016). Jarvis (2009) classified lexical CLI in two major categories lexemic and lemmatic influence. Lexemic influence is related to phonological and orthographic forms of words whereas lemmatic influence is related to syntax and semantics. This study operationalizes lemmatic CLI as the transfer of semantic and syntactic properties from background languages to the target language. Various researchers have subdivided this classification differently to describe the nature of lexical CLI (Jarvis, 2009; Ringbom, 2001; 2006; Sánchez, 2014).

Studies on lexical CLI portray dynamic ways of subcategorising lexemic and lemmatic influence. These subdivisions depend on the typology of languages in question, how the learner interpret meaning and the data collected. Nevertheless, they do not show how lexical CLI from background languages, which are unrelated typologically to the L3, influence the L3 vocabulary acquisition. Furthermore, studies have distinguished the roles of L1 and L2 in L3 acquisition studies. Some have shown that L1 is the main source of influence for L3 (Nation, 2003; Ortega, 2008; Vandevonede, 2014) whereas others say that L2 is the main source of the influence (Sánchez, 2014; Woll, 2016). On the contrary, Cenoz (2001; 2003) posits that both previously acquired languages are sources of influence for L3 acquisition. Although CLI has been said to have positive and facilitative effects on the learning a new language (Cenoz, 2003; Ortega, 2008; Ortega, 2016; Vandevonede, 2014), it still calls for more research to establish the influence of previously learned languages on L3 acquisition.

Therefore, this present study attempts to contribute to extant literature by providing data on understudied African languages while examining the CLI of background languages on the subsequent acquisition of English as L3 in a multilingual setting. Since the languages under study are not typologically related, the study did not use the Typological Primacy Model (TPM) as its framework but instead employed the Parasitic Model of L3 Vocabulary Acquisition. The study attempts to respond to the following research questions:

- a. How does lemmatic influence from L1 and L2 affect L3 spontaneously or strategically? Are there any observable lexical CLI features from L1 and L2?
- b. What is the dominant source language for lemmatic influence L3?

Hall and Ecke (2003) outlined a parasitic model (PM) of vocabulary acquisition that describes three stages that emerge in the learner's attempt to acquire vocabulary. The model relies on the learners' creating relationships between the form, frame, and its corresponding concept. Although the model is applicable stage-by-stage, it allows for different words in the emerging lexicon at different stages simultaneously (Ecke, 2015). Based on the Parasitic Model (PM) the following predictions are made:

- a. Both L1 and L2 influence the L3 vocabulary
- b. L1 has a privileged status over the L2.
- c. L1 shall act as a filter for L2 features that are transferred into the L3 vocabulary.
- d. Learners are inclined to use L2 rather than L1 as the source language.

### **Lemmatic influence**

The concept of lemmatic influence can be traced to research on word knowledge (Nation, 2003; Ringbom, 2001). These researchers explained word knowledge as the ability to recognise and retrieve the word from memory. However, lemmatic influence transcends the semantic categories of collocation, morphological and syntactic constraints on words. Several L3 researchers concur that lemmatic influence is the most common type of lexical CLI. It is argued that learners with low level of proficiency produce more lexemic CLI and those with high level of proficiency produce lemmatic CLI (Celaya, 2006; Lindqvist, 2010; Ortega, 2016). Furthermore, Lindqvist (2010), Munoz and Celaya (2007), and Ringbom (2001) claim that the influence of meaning originates only from the learners' L1. Indeed, lemmatic influence follows a dynamic and complex representation since the researchers have ended up with different results. For example, a study by Celaya (2006) suggests that lemmatic influence, e.g., *direct translations*

(*calques*), increases as proficiency heightened. While Ortega (2016) posits that that increased lemmatic influence is not directly connected to the proficiency level of learners. Unlike Ringbom (2001) who postulates that when proficiency increases the learners shift the organisation of lexical CLI from lexemic to lemmatic influence. These contradictory results support the complexity of L3 CLI.

### **The present study**

From the previous section, the complexity and dynamism of CLI in L3 acquisition is discernible based on previous studies on whether L1 or L2 only influence L3 or whether both languages influence L3 (Cenoz, 2003; 2013; Hammarberg, 2010; Ionin et al., 2011; Jarvis, 2009; Jessner, 2008; Nation, 2003; Neuser, 2017; Ortega, 2008, 2016; Ringbom, 2001; 2006; Sánchez, 2014; Treicher et al., 2009; Vandevondele, 2014; Wrembel, 2010). These contending views suggest the need to investigate the source language of influence and how lexical CLI from L1 and L2 influences the acquisition of L3 vocabulary. Even more interesting is the context in which these studies have been carried out. Although most of the studies have been carried out in multilingual settings, a limited number of them have conducted in Africa whose linguistic landscape is rich and diverse (Ahukanna et al., 1981; Chumbow, 1981; Sikogukira, 1993). The current study was carried out in rural secondary schools in Bukoba, Tanzania, where L1 Haya is the most widely used in the community; L2 Swahili serves as a language in formal settings. L1 and L2 are used extensively in everyday life whereas L3 is learned and spoken at school with limited use outside the school vicinity. Swahili and Haya languages belong to the Bantu language group and are therefore typologically related. Bantu is a large group of about 1400 languages belonging to the Benue-Congo sub-branch of the Niger-Congo language family (Maho, 2009). English, on the other hand, belongs to the Indo-European language family and it is, therefore, related to Swahili and Haya. In terms of status, English and Swahili are both official language and are languages of instruction in education unlike Haya that is an ethnic community language (ECL) that does not possess any official function in the country.

## **METHODS**

### **Participants**

The targeted population of the study were secondary school students from Bukoba rural district, which is located about 1,380kms from the largest commercial hub in Tanzania. 40 students (13 – 19 years) participated in the study. All the participants attended public primary schools in Tanzania where they learned English as a subject from grade 3. The

participants were selected from two secondary school levels: Form one—the secondary education entry level, and Form four—the exit level. The Form one students comprise a more recently exposed group to L3 English as the language of instruction whereas Form four students have been exposed to L3 English for three years. Furthermore, the participants were recruited from two schools: School A, a public school that only offers day schooling, and School B a public boarding school. School A participants spend a limited time within the school vicinity whereas School B participants are fully immersed in the vicinity. Boarding facilities engage students in mandatory usage of L3 English both inside and outside the classroom. Day schools can only enforce the mandatory use of L3 English during school hours and not outside the school vicinity. The inclusion of School B participants helped to determine whether the amount and quality of input, exposure, proficiency, frequency of use can shape the appearance of CLI. The description of the participants is as presented in Table 1.

### **Instruments**

The study employed a cross-sectional research design within which three language tasks were used to collect data on how L1 and L2 vocabulary influenced L3 vocabulary acquisition: a word association task (WAT), a letter writing task (LWT), and a wordless picture narration (WPN). All the participants filled out a questionnaire aimed at establishing their linguistic profile (L1=Haya, L2=Swahili, L3=English) as well as determining the suitability of participant inclusion in the study. The participants also completed an English language proficiency test (ELPT). The ELPT tested grammar, vocabulary, and comprehension. The study employed the Common European Framework of Reference for Languages (CEFR standard) for grading the proficiency level of participants. The reason for testing proficiency level was to determine whether the level of proficiency affects the amount of influence from the source language. The proficiency test has also been used by Neuser (2017), Ringbom (2001) and Woll (2016).

As earlier mentioned, the participants completed three tasks. The first language task was the word association task. Scholars had widely used the word-association tasks in earlier studies to investigate how L3 foreign language learners organise their mental lexicon (Dijkstra, 2003; Hall & Ecke, 2003; Söderman, 1993). The word-association task requires the participants to produce the first word in response to a stimulus word. This happens instantaneously to reveal spontaneous access to their mental lexicon (Woll, 2016). The word ‘mother’ was chosen as a stimulus for this task because of its familiarity and whenever the word is

**Table 1**  
*Description of Participants*

Characteristics	N	%
<b>Participants</b>		
Form one	20	50
Form four	20	50
<b>Gender</b>		
Total	40	100
Male	7	17.5
Female	33	82.5
<b>Mean Years of learning English</b>		
Form one	5	n.a.
Form four	8	n.a.
<b>Number of languages spoken</b>		
Three	40	100
Four +	0	0
<b>First language</b>		
Haya	40	100
Other	0	0
<b>L3 Proficiency</b>		
<b>School A</b>		
A1	5	25
A2	15	75
B1	0	0
<b>School B</b>		
A1	0	0
A2	14	70
B1	6	30

seen or altered, everyone has something to say about it. This task was also designed to prepare the participants for the subsequent writing exercise and help them to activate the necessary nodes in their mental lexicon (Vandevondele, 2014; Woll, 2016).

The second task was a letter writing that centred on the same frame topic, i.e., ‘a letter to my mother’. This task shows the concept of communicative competence, whereby its development is essential in the language learning and language acquisition process. In a letter to my mother frame, the task was designed to enable the learner to adopt a formal and informal language style. The task encouraged participants to consider and organise the vocabulary produced in the previous task in the letter writing task. The participants were not allowed to use any external resources such as dictionaries or smartphones. They were also given some indication about the expected length of their text of between eight and 12 lines, with a time limit of 15 minutes.

The final task was the wordless picture narrative whereby all the participants narrated a 30 – 50 words story orally in L3 English. The participants were required to study the wordless picture for five minutes before narrating the story. The wordless pictures entitled ‘The Goat and the Woman’ (see Appendix) were retrieved from a free online collection on wordless African stories that serve as an assistive resource for students involved in foreign language learning. The creators of the resource developed an approach known as a growing participator approach (GPA) aimed to assist learners not only to learn a language but also

to participate in the culture (Thomson & Thomson, 2020). The researchers selected this wordless picture story because it represented the cultural aspects of the area where the data was collected and aided the study participants in describing what is familiar to them in L3 English.

#### Procedures

The participants performed the language tasks in three separate sessions. In the first session, they completed the questionnaire and the language proficiency test. In the second session, they completed the word association and the letter writing tasks and, finally, in the last session, they completed the wordless picture narrative. The tasks were closely supervised by the researchers. The data analysis proceeded in three stages. First, data management and reduction was performed on all the data sets to ensure validity and reliability of the results. Second, scoring of the proficiency test, transcribing the narrative, and coding of the data collected from the three language tasks were completed consecutively.

#### FINDINGS

The data collected from the word association exercise produced 527 tokens. Results from the proficiency test indicate that participants from School B exhibited higher L3 proficiency (B1/A2) than the counterparts in School A (A2/A1). Moreover, results from the word association task indicate that language distance or linguistic typology is neither a leading nor a crucial factor in shaping the CLI on the TL. L1 Haya and L2 Swahili

are not related to L3 English genetically or typologically, yet the transferability of linguistic CLI suggests that there are other factors at play. Interestingly, there are fewer lexical CLI from L1 to L2, though they are genetically and typologically related. Table 2 presents evidence on how L2 Swahili has highly influenced L3 English, the differences in linguistic typology notwithstanding. The data also supports the results of the proficiency test whereby School B participants had less lexical

CLI in comparison to School A participants who had lower proficiency scores.

The results from the study indicate evidence of lemmatic influence among the study participants. Based on the classification of types of lemmatic influence presented by Jarvis (2009), Table 3 presents the frequency of lemmatic CLI in the content of the three language tasks used to elicit data from the study participants.

**Table 2**  
*Vocabulary Generated in the Word Association Task Indicating Source Language*

Entity	Level	L1 vocabulary		L2 vocabulary		L3 vocabulary		Total
		n	%	n	%	n	%	
School A	F1	1	11.1	83	53.2	58	16.0	142
	F4	3	33.3	30	19.2	99	27.3	132
School B	F1	4	44.4	16	10.3	78	21.5	98
	F4	1	11.1	27	17.3	127	35.1	155
<b>Total</b>		<b>9</b>	<b>1.7</b>	<b>156</b>	<b>29.6</b>	<b>362</b>	<b>68.7</b>	<b>527</b>

**Table 3**  
*Frequency of Lemmatic CLI in the Content of the Language Tasks*

Category	CLI		Source Language					
			L1 Haya		L2 Swahili		L3 English	
	n	%	n	%	n	%	n	%
Direct translation	39	40.6	4	10.2	35	53.8		
Comprehension difficulties	14	14.6			6	9.2	8	29.6
Choice of wrong word	24	25.0			10	15.4	14	51.9
Substitution	1	1.0			1	1.5		
Sub-categorisation	1	1.0			1	1.5		
Semantic association	7	7.3			7	10.8		
Pleonasm	7	7.3			4	6.2	3	11.1
Lemmatic self-repair	3	3.1			1	1.5	2	7.4
<b>Total</b>	<b>96</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>65</b>	<b>100</b>	<b>27</b>	<b>100</b>

All these instances of lemmatic influence were coded in relation to the parasitic model (PM) at the three levels adopted by Ecke (2015) based on lexical form, syntactic frames and meaning (Ecke, 2015; Hall & Ecke, 2003). These scholars argue that a trilingual speaker, in any attempt to produce a word, map out the meaning onto a lexical form through access to its syntactic frame. Evidence from the study indicates the retrieval of forms at all three levels. The evidence of these errors are presented in Table 4, which indicates the source language and the intended L3 English form. Since L1 Haya and L2 Swahili are typologically similar, evidence from the L2 Swahili indicates the mapping of the concepts in the frames as illustrated in Tables 4 and 5.

Examples of form-related transfer types that were evident in the data included semantic association, direct translations, choice of wrong word, and substitutions. Semantic association is a form of CLI where learners use TL lexical items associated with referents to known vocabulary. Examples (a) – (c) in Table 4 illustrate the semantic associations that the learners made. Moreover, the learners applied lexical CLI through transfer of idiomatic phrases from one language to another, which constitutes direct translation due to the

learners' awareness of existing target language forms but not their semantic and collocation restrictions (Ringbom, 2001). Examples (1) – (3) from the data show how the L3 English learners directly translated their L2 Swahili structure in L3 English and how the learners relied on their background languages in L3 production. This data illustrates how background languages serve as a foundation and a language learner depends on them when acquiring a new language.

- (1) \*I like to speak English because during you know English you can learn all subjects and to pass.  
*Ninapenda kuongea kiingereza kwasababu unapojua Kiingereza unaweza kujifunza masomo yote na kufaulu.*
- (2) \*I am close school  
*Ninafunga shule*  
Ni-na-funga shule  
1.SM - PRES-close 3school  
'I am going on school holiday'
- (3) \*my aims of writing this letter...  
*madhumuni yangu ya kuandika barua hii...*  
Intended: I am writing to you to...

Choice of a wrong word occurs when learners confuse its use due to its similarity to a word in the

TL since they are not usually fully exposed to the TL and have limited input. In this study, the choice of wrong words is as presented in Table 4 examples (d) – (h). For (d), the participant has used the word ‘*mise*’ and ‘*aim*’ in an unfit context. We can assume that the participant used such words by considering the form and pronunciation to be a bit like the word *miss* and *I am*, respectively. These words are not from L1 or L2 but from L3 itself. In addition, the interchange in the use of *you*, *your* and *you are* signals confusion among the learners.

The final form of related CLI noted was the lemmatic self-repair, which occurs when the language learner produces an instance of lemmatic transfer followed by an immediate self-repair. In this study, this occurrence is evident in the oral task of participants when narrating the story based on a wordless picture, as the following examples illustrate:

- (4) \*The end story...The end of my story...
- (5) \*...she move... she went to the stream...
- (6) \*...washing back...washing again her clothes

**Table 4**  
Lemmatic CLI at form-related associations and errors

Sn.	Word association/ meaning errors	Source language	L3 target word
a.	* is the <u>way</u> of cow	L2: <i>ni njia ya ng'ombe</i> ni njia ya ng'ombe PRES way PREP cow	Cow path
b.	*.a <u>cow</u> go clothes and eating	L2: * <i>mbuzi alizifuata nguo na kuzila</i> A – li – zi – fuat – a 1SM. – PAST – 10.OBJ – follow – FV Nguo na ku – zi - la 10.clothes CONJ. INF – 10.OBJ – eat 'She went for the clothes and chewed them'	the goat chewed on the clothes
c.	*and to dried at the <u>thread</u>	L2: <i>uzi</i> – ‘thread’ <i>Kamba</i> – ‘washing line/rope’	washing line
d.	* at home <u>aim</u> <u>mise</u> you mother	L3	I miss my mother
e.	* hope <u>your</u> fine	L3	I hope you are fine
f.	* <u>you are</u> daily activities	L3	your daily activities
g.	* that you fine	L3	that you are fine
h.	* pass my <u>response</u> to my relatives	L3	pass on my greetings to..... send my regards ....
i.	*I hope big	L2: <i>Nina matumaini makubwa</i> <i>Ni – na matumani makubwa</i> 1 SM. – PRES.have 6.hope 6.big 'I have big hopes'	I have high hopes
j.	*my aims of writing this letter....	L2: <i>Madhumuni yangu ya kuandika barua hii</i> Madhumuni yangu ya ku – andik – a barua hii 6.pl.aim 6.POSS 6.PREP INF-write – FV 'My aim of writing this letter...'	The aim of writing this letter....

Table 5 presents CLI at the frame level. Evidence on types of lexical CLI at frame level that were found in the data include substitution, pleonasm, and subcategorization. Using substitution, the learners creatively constructed sentences framed on L2 Swahili order and then substituted it with the equivalent in L3 English. This shows that the knowledge of the previously acquired language is crucial in learning a new language as they act as a base in communicating, as exemplified in (g) found in Table 5. The learner at this stage was not aware of the difference in the constituents' arrangements between the two languages. This case happens spontaneously and was found in the constructions of Form one students, who were recently exposed to L3 as a medium of instruction.

In addition, evident among the learners was the use of pleonasm. It was evident that learners borrowed L2 concepts in the absence of substitutive vocabulary. They provided explanations using words available to them. Example (a) in Table 5 is an example of circumlocution among the cases that were found in the data. Similar cases of pleonastic expressions were found in the wordless picture narration whereby the participants would narrate the sequence of pictures back and forth. The following excerpt from the data illustrates this point.

- (7) ...\*want to put in the grasses the is the goat the see to eat that grass...  
'put the clothes on the grass and the goat saw them...'

Sub-categorisation was also evident in the data involving the syntactic influence of the head of a phrase and its complement. The data indicates that the learners chose wrong complements (e.g. NP instead of PP) or the wrong word within the complement. These syntactic specifications are understood by the language user with recourse to corresponding headwords in another language and used in the target language (Ortega, 2016). Two types of sub-categorisation emerged in this study: (i) The participants chose the adverb instead of a prepositional phrase; and (ii) they used a verb phrase instead of a noun phrase as exemplified in (8):

- (8) \*She was put clothes upwards that was  
*Alizianika juu*  
 A-li-zi-anik- a juu  
 1SM.-PAST-9.OBJ-spread-FV up  
 ‘She hanged the clothes (to dry)’

Example (8) illustrates the influence of L2 spoken language whereby the use of the adverb ‘juu’ is accepted. L2 Swahili is a highly inflected

language with affixes on the verb. The notion that meaning is obtainable based on the context was applied by the learner when telling a story of a wordless picture in L3 English. Evidently, the learner lacked the vocabulary to explain the action of ‘hanging clothes’ and, thus, selected a verb that required qualification regarding location expressible using an adverb. The second category is the unnecessary use of sub-categorisation of double possessions and double nouns. Consider the following illustration (9):

- (9) \*all my fellows their my friends  
*wenzangu wote walio rafiki zangu...*  
 Wenzangu wote wa - li - o rafiki zangu  
 2.POSS.fellow all 2.SM - PAST. REL  
 10.friend 10.POSS  
 ‘my friends’

In this example, the influence from L2 compelled the participant to use words that show possession repeatedly ‘...my’... their my..’ and two nouns to mean the same thing, in one construction which is not acceptable in L3.

**Table 5**  
*Lematic CLI at the Syntactic Frame Level*

Sn.	Examples	Source language & structure	L3 target word/structure
a.	*so that the day of your birthday	L2: <i>Siku ya kuzaliwa</i> [day of birth]	your birthday
b.	*put in the grasses	L2: <i>alitaka kuweka kwenye nyasi</i> A - li - tak - a ku - wek - a kwenye nyasi 3.SM - PAST - want - FV INF.-put - FV PREP.in 10.grass	put on the grass
c.	*and the girl started again	L3	She repeated
d.	*the girl was wanted	L3	The girl wanted
e.	*then come goat then come again and washing them..	L3	The goat messed the clothes. She washed them again.
f.	*on the river (wash)	L2: <i>mtoni</i> Mto - ni 3river - PREP.on	in the river
g.	*I hope you fine	L2: <i>Natumaini wewe mzima</i> Na - tumain - i wewe mzima 1SM. - hope - FV you fine	I hope you are fine
h.	* pass my <u>response</u> to my relatives	L3	send my regards....
i.	* me I am a winner	L2: <i>Mimi ni mshindi</i> <i>Mimi ni mshindi</i> 1s.me PRES 1winner	I am an overcomer
j.	*I too, I am fine	L2: <i>Mimi pia sijambo</i> Mimi pia sijambo I too 1.AGR.NEG.problem	I am fine
h.	*.am going well with my studies...’	L2: <i>Naendelea vizuri na masomo yangu</i> Naendelea vizuri na masomo yangu 1SM.going well PREP 6.studies 6.POSS	I am progressing/doing well

The data presented in Table 5 show that lemmatic transfer extends beyond the semantic categories. This study confirms that the learner is aware of the target word but not its semantic restrictions (Ringbom, 2001; 2006).

**DISCUSSION**

As earlier indicated, this study investigated the lemmatic CLI on the acquisition of English vocabulary by L3 English learners. The findings

seek to generate a greater understanding of the influence of L1 and L2 on L3 vocabulary acquisition. More precisely, the research focuses on how lemmatic influence from L1 and L2 impact L3 and the choice of the source language to L3 CLI. Using the Parasitic Model, we predicted that both background languages would influence the L3 vocabulary with the L1 having a privileged status over the L2 considering the multilingual setting in which the data was collected and the predominant use of the ethnic community language. It was also predicted that the L1 would act as a filter for L2 features that are transferred into the L3 vocabulary and that the learners would be inclined to use the L2 rather than L1 as the source language.

The study confirms that the learners depended on previously acquired languages as a frame for their learning experience of L3 vocabulary as predicted. It is evident for the most part that lemmatic influence was strategic based on the methodology and context of the data. Further observations of the nature of the CLI indicate that all three stages of PM were functioned simultaneously. In this regard, the learners were inclined towards reducing the complexity of the language tasks by detecting similarity between the novel structures and already acquired knowledge. Efeoglu et al. (2019) argue that even in the absence of lexical-form similarity, participants detect and use similarity as a frame and meaning levels when learning new and unstable vocabulary, which was the case in the study as well. Additionally, the learners detected where they needed to self-repair their errors. Although the learner self-repaired in certain instances, other types of lemmatic influence confirm the argument that lexicon-external factors modulate parasitic connections (Hall & Ecke, 2003; Ecke, 2015; Ecke & Hall, 2014). The participants of this study did not only use direct translation, substitution, sub-categorisation, and pleonastic expressions to aid to their selection of form-meaning connections but they also depended on context-aided semantic associations from the language tasks. Although this study did not aim to check for factors, its findings imply that there are other factors at play, thus warranting an extensive study in the future. The results also supports the PM emphasis on learners' tendency to rely on background languages to make connections as the acquire vocabulary. However, the PM suggests that the connections enhance learning though with occasional lapses and deviant constructions (Ecke, 2015; Wei, 2006; Weinreich, 1953).

Neusser (2017) did an extensive investigation into the source language of lexical transfer in multilingual learners and set her study within the framework of five main factors: Proficiency, exposure, psychotypology, L1/L2 status and item-specific transferability. In her study, she found that proficiency and exposure were significant predictors

of the source language. Although psychotypology did not have any significant effect, each factor had an isolated effect. Neusser's (2017) key observation was that high proficiency in a background language correlated with a higher rate of transfer and that it is the L1 status rather than the L2 status that affects the choice of the source language. Unlike Neusser (2017), the current study has determined that the L1 status does not influence transfer. The study has established that there was a higher rate of lemmatic transfer from L2 (94%) than from L1 (6%). In Tanzania, the status of L2 Swahili was considered higher relative to other ethnic community languages (Batibo, 2005; Brock-Utne, 2006; Qorro, 2005; Rubagumya, 1991) because it also served as a medium of instruction.

In terms of proficiency, the current study confirms that with increased proficiency in L3, transfer from L2 decreases. In other words, high proficiency in L2 coupled with low proficiency in L3 would lead to high transfer from L2. Participants with A1 proficiency level highly used direct translation whereas A2 proficiency level participants used pleonastic expressions and semantic associations. Participants with higher L3 proficiency had the least transfer in comparison. This discussion indicates that L1 was limited in its influence on L3 and, therefore, lacked a privileged status over the L2. On the other hand, there was little evidence to support a cumulative effect of the lemmatic influence from L1 and L2 sources.

One of the predictions of this study was that the L1 shall act as a filter for L2 features that are transferable to L3 vocabulary. Bardel and Falk (2007) argue that L2 blocks L1 influence while serving as a filter in L3 acquisition. As far as lemmatic influence is concerned, there is no instance of L1 acting as a filter for transfer into L3. Evidence from the study suggests that L2 acts both as a filter and a source language for L2 features in L3. Due to the context of instruction and the relegated status of L1, it appears the learners use the L2 because it is the language that they habitually use in the classroom context. This evidence is supported by observations from other researchers (Berman & Slobin, 1994; Slobin, 1996; Von Stutterheim & Nüse, 2003), which suggest when speakers prepare to talk, their choices are 'filtered' through the linguistic categories that they habitually use to categorise and express events. Slobin (2004) predicts that habitually employed linguistic categories guide the attention to certain types of information that are then selected for expression, giving rise to language-specific rhetorical styles or perspectives.

However, this study also identified instances that made it difficult to pinpoint the source language for the L3 vocabulary. The data in Table 2 also indicate that there was significant use of L3 vocabulary (68.7%) relative to L2 vocabulary



applied in the word association task. Indeed, the current study has observed forms and constructions that cannot be framed but have been activated and have resulted in inappropriate lexical choices. Thus, we can assume that the L3 lexical choices made by the participants contain the items they have learned and most likely other appropriate lexical choices have not been fully specified in their mental lexicon. Researchers have argued that when the speaker's knowledge of the third language lexical items is incomplete or when the speaker's third language lexical items are too insufficient to express his/her intended meaning, he/she must look for a semantic form in the multilingual mental lexicon, whether similar or equivalent to lexemes in their interlanguage (Wei, 2006; Dewaele, 1998).

## CONCLUSION

This study has examined lemmatic CLI on the acquisition of English vocabulary by Tanzanian L3 English language learners. The results of the study were as follows: First, there is evidence of lemmatic influence from background languages and that L1, L2 and L3 connections enhanced the acquisition of L3 vocabulary among the learners. More significantly, L2 played an instrumental and facilitative role, both strategically and spontaneously, in influencing L3 vocabulary acquisition in comparison to the L1. Second, the L2 possesses a privileged status over L1 that is inherent with the assigned spheres of its usage in the country. Not only did the L2 status influence the choice of the source language for learners, but it was also modulated by proficiency and exposure among the learners in the educational setting. Furthermore, the study confirms that L3 English learners reduce CLI as they increase L3 proficiency. Finally, L2 acts as both filter and source language for L2 features in L3. Due to the habitual use of L2, we can assume that the learners have increased metalinguistic awareness capacity in L2. Consequently, the L1 is blocked not only because of its lower status but also because of its limited use in the foreign language learning context. Overall, these findings suggest a need for extensive research into factors that influence lexical CLI in foreign language learning situations in communities where the use of the L1 and L2 are equally predominant. However, the results imply that frequency, exposure, quality, and amount of L3 input are fundamental variables in the acquisition of the TL language vocabulary in the foreign language acquisition context.

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## APPENDIX A

### Wordless Picture Narration

YOUR AGE..... Years old.

Put V or X in the boxes provided accordingly

DISTRICT: Bukoba Rural

SCHOOL: Government  Private  Boarding  Day

CLASS: Form one  Form four  Gender: Male  Female

Use five minutes to study the wordless picture, and then narrate 30 to 50 words story titled 'The goat and the woman'.



Source: Thomson, A. & Thomson, G. (2020). *Growing Participator Approach* retrieved from <https://speakbroadly.com/gpa-method/>