THE PHONOLOGICAL BASIS OF MISSPELLINGS IN THE WRITTEN ENGLISH OF KIKUYU SPEAKERS

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ABSTRACT

This study examines the influence of a first language (L1) phonology on second language orthography. Misspellings have been a common error in the written English of non-native speakers. Though even native speakers of English mis-spell words in English, this study focused only on the misspellings made by learners whose first language is Kikuyu. The study was done with a view to investigating whether the phonology of Kikuyu as a learner's first language and pronunciation of words in English as the second language, based on the influence of the phonology of Kikuyu affects orthography in English. The study concludes that certain misspelt English words are a fully inflected form with aspects of the phonology of Kikuyu language and has phonological segments that are influenced by the phonological structure of Kikuyu.

Key words: Error Analysis, Phonology, Orthography

1. Introduction

Kikuyu is a Bantu language spoken by the Gikuyu people, who mainly occupy the Central Province of Kenya but are also found in many parts of the country as well. Subsequently, it is taught in schools as a vernacular in the areas where it is predominantly spoken. Learners between the age of six and nine years learn how to write in this language in their lower primary school course.

When a speaker whose first language is Kikuyu is learning English as a second language, many errors tend to occur in spoken and written English.

A map of Kenya showing the location

of most speakers of Kikuyu language

In Kenya, English is taught in schools as a second language and in most cases, a child earlier acquires a first language, which is one of the indigenous languages spoken in the country. Generally, the learning of English in Kenya is strongly influenced by the learner's L1 in various aspects. The speech habits in the L1, which is normally an indigenous language spoken in Kenya, are transferred to the learning of L2. The speakers of English as an L2 have difficulty producing some sounds as they have already formed all the habits of speech appropriate to their own language and those habits are firmly fixed in their brain.

Kikuyu and English do not have the same phonological systems. The two languages have appreciable differences in their phonological inventories and structures. As opposed to Kikuyu, in English, to a large extent, there exists no obvious relationship between pronunciation and orthography. While in learning Kikuyu, a learner first learns the sounds of the language, then

learns the graphemes of the language, then learns to relate the sounds to the graphic symbols, in English, there is an inconsistent link between pronunciation and orthography. Learners must acquire the orthographic rules of the language that are independent of the sounds. Learners of English whose L1 is Kikuyu are likely to be affected negatively by the influence of their L1. As Ellis (1985:19) observes, 'when a Frenchman speaks English, his English sounds French. The learner's L1 also affects the other language levels – vocabulary and grammar'. Since some traces of L1 phonology will be evident in spoken L2, this study investigates any evidence of influence at the level of written language, which is attributable to the influence of L1 on the L2 system.

Statement of the problem

Differences in the alphabet and sounds of Kikuyu and English pose a problem in spelling. In an ideal spelling system, we would have one symbol for one sound, one grapheme for one phoneme in all languages. But this principle throws up certain difficulties in practice. If we confine ourselves to consideration of the English alphabet, one major difficulty is that it is an arbitrary list of twenty-six letters, which do not necessarily correspond to the alphabet and sound system of Kikuyu.

The idea of misspelling has attracted much interest among scholars in applied linguistics. As a teacher, I have observed that learners of English have continued to lose marks and get poor results as they are penalized for all misspelt words in their written work. Misspelling has also made communication through writing difficult for some people, as the words written in some cases are not easy to read. Although many studies have been conducted on the influence of L1 on L2 acquisition, to the best knowledge of this researcher, no study has been done on the influence of Kikuyu phonology on orthography in English.

This study investigates the extent to which the misspelling of English words by learners whose first language is Kikuyu may be accounted for in terms of first language influence and whether such influence (if established) may be attributed to the influence of the sound system of Kikuyu as the first language or to analogies based on the pronunciation of the target language words or both.

Objectives of the study

The specific objectives of the study are:

a. To investigate the extent to which misspelling of English words by secondary school students whose first language is Kikuyu, may be accounted for in terms of the influence of their first language phonology.

b. To investigate whether, if such an influence is established, it is attributable to the sound system in the first language or the mispronunciation of the target language (English) words based on the influence of the sound system of the first language, or both.

2. Review of literature

Empirical studies on phonological basis of misspellings

A number of researchers have studied different distinct features that characterize English that is spoken and written in Kenya(Njeru 2013, Waitiki 2013, Schmied 2006, Furaha 2007, Nyamasyo 2009 and Kioko 2009). In a study that explores the influence that pronunciation has on spelling and vice-versa, Waitiki (2013:33) observes that spelling based on pronunciation is a common and growing trend among university students in Kenya. Nyamasyo (2009) observes that the written English of Kenyan pre-university students is riddled with misspellings and traces part of their origin to be the phonology of their first languages. On a study that investigated dialectal influence on the learning of English as a second language in Kenya, Njeru(2013:131) posits that "the effects of first language on learning second language are often experienced in both the written and

spoken languages".

A similar influence has been noted by scholars elsewhere. In a study comparing the spelling of multilingual learners, Goswami, Ziegler and Richardson (2005) concluded that there was consistency of spelling based on phonological awareness. In a comparison of two scripts of used in Korean *Kanja* and *Hangul,* Kim, Taft and Davis(2004) concluded that there was an orthographic -phonological link in the lexicon. They observed that in writing, there was a conflict between the lexical and sublexical information.

However, none of these studies shows how the phonology of Kikuyu language and pronunciation or mispronunciation of words in English based on Kikuyu phonology affects orthography in English.

Theoretical Framework

In this study, an eclectic theoretical framework is used as it touches on three linguistics areas: contrastive analysis, error analysis and segmental phonology. Contrastive Analysis, started in the 1970s, sought to 'predict the errors that learners make by identifying the linguistic differences between their L1 and the target language' (Ellis 1994:47). Error analysis(EA) provides a methodology for investigating a learner's language. For this reason EA constitutes an appropriate starting point for the study of learner language and L2 acquisition. EA research is of use in this investigation as it provides the following guideline to be used in the study of errors:

1. Collection of a sample of learner language

2. Identification of errors

3. Description of errors

4. Explanation of errors

5. Evaluation of errors

Segmental phonology also forms the basis of this study. According to Odlin (1989: 115), segmental errors are 'errors involving vowels and consonants'. Since most syllables have a structure, these errors are likely to arise where the phonemic inventories of the two languages – Kikuyu and English differ. Most Kikuyu phonemes differ from English phonemes in various respects. Kikuyu phonology is characterized by prenasalisation of voiced consonants, which does not happen in native English. A complete contrastive analysis of the phonology of the two languages will help explain and predict the errors that are likely to occur in the target language. Odlin (1989:115) states that 'the most salient consequences of linguistic differences are production errors which result in pronunciation patterns that diverge from those found in the target language.' The segments to be identified and studied in this research can be analyzed as consonants and vowels of various types.

An outline of Kikuyu phonology

Evidence drawn from studies on the phonology of Kikuyu points to influences on second language phonology, that are due to native language patterns of pronunciation and the second language effect on the pronunciation of English, which is the second language. A very probable example of influence is the vowel insertion rule to break consonant clusters, which can be traced to the Kikuyu phonology. For instance, the word 'workshop' /wɜkʃɔp/ has been picked from a learner's written work as 'workershop' /wɜkaʃɔp/. A brief overview of consonantal and vowel processes act as a basis for the interpretation of the misspelt words in English.

Consonantal Processes

A number of phonological processes take place in Kikuyu namely:

i.   Epenthesis

Kikuyu language has a preference for open syllable structure. A word that is borrowed from another language undergoes the process of epenthesis where a vowel is inserted to break a consonant cluster in order to conform to Kikuyu syllable structure. English has consonant clusters, which must be broken down by many people who are speakers of Kikuyu as a first language for ease of articulation.   The following data exemplifies the phenomenon whereKikuyu words, borrowed from English, have a vowel inserted to break consonant clusters. The added segment may be at word medial or word final positions:/βεtoro/   (petrol),/bureki/   (break), /βurani/(plan), /buroti/ (plot) /kiriti/ (crate).

ii. Prenasalisation of plosives

In addition to the insertion of a vowel, consonants are also added to other consonants especially in borrowed words and also in spoken English. Most of the insertions made in spoken English by Kikuyu speakers are made so as to create a phonologically acceptable sound sequence in accordance with Kikuyu phonology. In Kikuyu, the voiced alveolar stop /d/ has to be preceded by an alveolar nasal /n/. The voiced velar stop is also preceded by its nasal counterpart /ŋ/ as shown in /ndIŋgIrI/ (degree), /ndɛrɛβa/ (driver), /ŋgoru/ (goal)

Though the above are Kikuyu words borrowed from English, the motivation behind their formation is also evident in the speech of Kikuyu speakers when speaking English.

iii. Consonant Substitution

When a person whose L1 is Kikuyu is speaking in English, or using words borrowed from English, several consonants are substituted to conform with the consonant sounds in Kikuyu. The lateral liquid /l/ in English is replaced by /r/ in Kikuyu but /r/ is always retained as shown in the following data: /βairo/ (file), /βurana/ (flannel), /oIr**o**/ (oil) and /βɛŋgI/ (bank)

Words in English containing the labial obstruents - /v/, /f/ and /p/ are replaced by the voiced bilabial fricative /β/ in Kikuyu: /βɛsItI/ (vest), /βɛtoro/ (petrol), /βonda/(powder), /βomu/(form)

The palato alveolar fricative /ʃ/ in Kikuyu takes the place of /s/ and /z/ in spoken English or in words borrowed from English by Kikuyu speakers. In some cases, /s/ and /z/ are also replaced by /ð/. For instance in: /ðIto/ (store), /ʃIðo/ (chisel) and (/ʃIβo/) chief.

iv. Metathesis

This is a process where two segments are interchanged within a word without a change in meaning as shown in the following examples: Kioski - kioksi (kiosk), Gitingitingikika - gitingitikika (cannot be pushed) Metathesis also takes place when a Kikuyu speaker speaks English, for example the word 'ask' may have the segments interchanged to be pronounced as /aks/.

The Kikuyu Syllable

Goldsmith (1990:153) observes that 'the syllable is at the heart of phonological representation.' . Kikuyu language has specific rules governing its syllable structure. In consistence with the generative CV phonology model explained in Goldsmith (1990:156), 'the syllable is assumed to have a three tiered structure consisting of a syllable node 'σ." The C and V elements on the tier are the consonant and vowel segments respectively. A general syllable structure consists of an Onset and Rime as demonstrated in the diagram below:
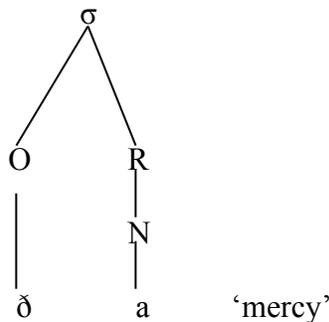
Every syllable in Kikuyu must contain a vowel. Syllables with the sequence CCV or VCCV are not permitted. The rhyme is the most essential element of the syllable in Kikuyu. It is obligatory in a syllable.. Segments of the CCV or VCCV in English undergo changes when a word is borrowed in Kikuyu in order to conform to the phonological structure of Kikuyu.

3. Methodology

The researcher collected 285 written compositions from high school learners whose first language is Kikuyu. The schools included Kikuyu Township Secondary School, Stonebic Secondary School, Riara Springs Girls High School and St. Elizabeth Academy. The subjects were given a test in the form of a creative writing exercise. The learners in those different schools were asked to write creative compositions by their teachers and later, the compositions were handed over to the researcher. After getting the compositions, all misspelt words were identified. Classification was then done to identify the different errors according to their nature and possibility of being attributed to the influence of first language phonology.

4. Findings and Classification of errors

The collected data, in form of misspelt words, were classified depending on the interpretation of the origin of the misspelling and summarized as follows:

All the misspelt words (n=424) were identified. Not all misspellings could be attributed to the phonology of Kikuyu. Some misspelt words such as *occured (occurred), *commitee, (committee) and more others were classified as errors that are made by made most writers in English including the native speakers of the language and they were beyond the scope of this study.

Errors related to Phonemic Differences in Kikuyu and English

Misspelt words were classified according to perceived differences in phonemes between the two languages as follows. The letters under observation are in bold print. The words below are examples picked from a large corpus of data.

Misspelt Word	Correct word	Cause of variation in spelling
***l**ight *sup**l**ised *oursel**f**es	**R**ight surp**r**ised oursel**v**es	Stems from the differences in phonemes between Kikuyu and English.
*amus**m**ent *hero**s** *extrem**l**y *We**n**esday	Amus**e**ment hero**e**s extrem**e**ly We**d**nesday	Silent Graphemes: Examples of the errors in segments of a word with a grapheme that is not articulated in speech were common in the corpus. These were classified as silent consonants and silent vowels.
*recog**o**nise *work**e**rshop *part**i**ner *respect**i**fully *punish**e**ment	recognise workshop partner respectfully punishment	Epenthesis: This phonological effect is an indication of the influence of the phonology of Kikuyu as the learners' first language. The syllable structure of Kikuyu permits only the CV sequence and in speech, a speaker breaks down CC clusters in English words by inserting a vowel between the two consonants for the ease of articulation as shown in the data below. The inserted segments are in bold print.

dicided minites sheavering dilisious	decided minutes shivering delicious	If a speaker of Kikuyu does not distinguish between the sounds /i:/ and /i/ as in 'seat' and 'sit' respectively, then these two words are in effect homophones to him/her and they cannot use any phonological basis for deciding on the correct spelling for the intended word.
*spices *suitation *artsits	pieces situation artists	Metathesis: Two or more segments are interchanged within a word without a change in meaning creating a misspelling as shown in the examples below.
embarassing **inteligent** **rabit**	Embarrassing Intelligent rabbit	Double consonant graphemes: Errors in spelling were detected where learners failed to double consonants in a word. The consonants within a word are either doubled or deleted due to overgeneralization of rules of English by the learner. Though these types of errors were minimal compared to the other perceived causes. Double consonants not exist in Kikuyu language
*accommondation *promblem	Accommodation Problem	Nasalisation: In consistence with the phonology of Kikuyu, the dental stops in these words are nasalized.

* to	Too	Vowel length: The learners' failure to distinguish between long and short vowels led to the following errors in the corpus data:
*to	two	
*for	four	
*live	leave	
*bit	beat	

5. Discussion

The misspellings identified in the collected compositions were classified according to the spelling anomaly in specific segments in the words. That classification resulted in the grouping of errors according to either the influence of the first language phonology or the pronunciation of the words in English as the target language.

Some of the misspelt words collected contained more than one instance of misspelling. For instance, the word: *sarouding, instead of 'surrounding' contains three errors namely, wrong representation of a vowel, failure to double the letter 'r' and omission of 'n', which is an indication of a phonological process in Kikuyu where a nasal before another consonant is usually lost. In such occurrences, the word was classified under three categories according to the perceived cause and nature of the error.

The findings lend credence to the hypotheses that the first language phonology and the mispronunciation of words in the target language influences orthography in English. In the eight categories of the major classification of misspellings discussed in this paper, it may be concluded that there are problems which are caused by the influence of the phonology of Kikuyu as the first language and the pronunciation of words in English.

The findings indicate that to a large extent, the subjects in this study relied on phonology for orthography. The subjects' reliance on phonetic guidance when judging the spelling of a word in English affected spelling because the language lacks consistency between orthography and phonology. Words that contain some phonologically plausible spelling in the Kikuyu language induced the learners to rely more on phonological plausibility when writing words in English.

The syllable structures of English and Kikuyu differ and subsequent phonotactic constraints lead to misspellings. Since phonotactic rules determine which sounds are allowed and which ones are not, in each part of the syllable, the application of the syllable structure of Kikuyu on some segments of English words gave rise to errors. For instance, in the misspelt word, *recogonise, the learner inserted a vowel between the letters 'g' and 'n' to break a consonant cluster in speech as is in the case in the syllable structure of Kikuyu. English, on the other hand, allows complicated syllables. A syllable may begin with a string of three consonants (as in 'string' or 'splash') and occasionally end with as many as four consonants (in 'prompts' or 'sixths').

The list of errors also contained some phonologically implausible misspellings for instance; *occured, *swiming, *peacefull and *hateing, among others. This was evidence of other causes of misspelling apart from the phonology of both the first and target language. The other causes of misspelling were not explored as they were not within the scope of this study.

An individual phoneme was unstable in spelling in a word when there were many phonologically acceptable alternatives for it. For instance, in English, the phoneme /k/ may either be 'k', 'c' or 'ck' in writing and the occurrence of many graphemes to represent such phonemes led to misspellings like the word 'lose' being written as 'loose.'

English has an orthography that is difficult for native as well as non-native speakers. The variety of errors reflect in a large measure that some errors made by ESL students are often identical to those made by native speakers for example *later, instead of 'latter' (or vice versa), *writting instead of 'writing' and *sleaping, instead of 'sleeping'. Target language overgeneralization is also a potent influence on spellings as these misspellings arise from overgeneralization. The difficulty of the English spelling system provides evidence that whatever proves difficult for native speakers of a language can also prove difficult for its non native speakers but the latter are bound to make more errors as the influence of their L1 also makes its contribution.

When the phonological knowledge required in English had not been developed in the first language, ESL students resorted to the form of a word closest to their native language.

Conclusion and recommendation for further studies

While doing this study, other areas and issues of interest to scholars in linguistics came to my attention and there is need for further research to be done in the following areas. Since this study established that the phonology of Kikuyu as a learner's indigenous language influences orthography in English, it is important for research to be done to investigate whether other indigenous Kenyan or African languages have a similar influence on orthography in English.

Linguistic investigation should also be done to establish if tone and stress in a native language influences orthography in an L2.

Finally, research should be done on the comparison of spelling errors made by native speakers of English and those made by learners of English as a second language to show the extent to which the languages of these learners influence orthography in English.

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