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Research Article

A CONSTRAINT BASED STUDY OF THE TIV LEARNERS OF ENGLISH PHONOTACTICS

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ABSTRACT

The study presents explanation on the likely pronunciation errors evident to Tiv learners of English phonotactics. The researchers adopted a descriptive method and optimality theoretical framework to note the possible constraints the Tiv learners of English as L2 encountered. Tiv speakers of the English realize phonotactics of English words differently. They violate the phonotactic rules of the language in realizing consonant clusters, assimilation and vowel harmony. The study observes that the Tiv learners experienced difficulties in realising English syllabic pattern with consonant clusters; they find it difficult pronouncing it without the insertion of a vowel sound, hence, transferring this feature from their language to the L2. Tiv also has onset restriction for syllables i.e. most syllables have onset. In other words, no vowel can begin a syllable except at word initial stage.

Keywords: Phonotactics, Optimality theory, Tiv, English.

INTRODUCTION

One of the uses of applied linguistics is to use theories propounded by linguists- phoneticians, phonologists, grammarians, etc to aid language teaching and learning. Sometimes the theories are borrowed from other fields other than linguistics, say psychology, sociology, computer science, etc. In this work, as the title suggests, we adopt the theory in linguistics called Optimality Theory (OT) to attempt a basic description and analytic treatment of how English phonotactics are realized in Tivland when they are learnt by the Tiv language native speakers. Tiv Language belongs to the Niger-Congo language family and can be further classified as Benue-Congo language. It is predominantly use by the Tiv people of Nigeria for interpersonal communications, trade and religious worship.

In the classification of African languages, Greenberg (1963) classifies Tiv as belonging to the Southern Bantoid subgroup of families. Johnston (1929) further identified this group as comprising Bantu, Jarawan, Tivoid, Beboid and the wild Grass-fields families. The language is spoken in Benue, Taraba, Nasarawa and part of Cross River States as well as Cameroun. By and large, the language is largely mutually intelligible to all its native speakers.

Anybody who has spent some time examining how the Tiv people communicate in English will quickly realize that the incompetent Tiv speakers of the English language (i.e. those who are still learning English) realize phonotactics of English words differently. They violate the phonotactic rules of the language in realizing consonant clusters, assimilation and vowel harmonization. This depends largely on mother tongue interference and ignorance of the correct spellings of such words. As a result of such wrong pronunciations, there are problems of mutual understanding of their speeches when discussing with others. This constitutes a large problem in schools, markets, churches, meetings, hospitals and homes in Tivland. It is against this backdrop that this study is informed, also they often misconstrue that languages differ in the ranking of constraints;

The attempts of the Tiv people in learning the English language as a second language (L2) for effective communication occur with certain constraints and difficulties at different levels. However, this study concentrates on the constraints the Tivs face in learning the English phonotactics. The research is aware of the fact that this problem has a root cause, forming the basis for this research. The primary objective of this study therefore, is to analyze, ascertain and unveil these challenges, herein referred to as the constraints base on sonority hierarchical arrangement of phonemes in the syllable structure of English language.

The phonology of a language is like a sieve through which everything that is said crosses. Every one acquired the system of his mother tongue. But when one hears another language spoken one intuitively uses the familiar "phonological sieve" of her mother tongue to analyze what has been said. However, since this sieve is not suited for the foreign language, numerous mistakes and mispronunciations are the result. The sounds of the foreign language receive an incorrect phonological interpretation since they are strained through the "phonological sieve" of one's own mother tongue. Native speakers of a language know the rules of putting speech sounds together to form words. Hence, learning a language involves learning the rules of the language. It is in light of this that English phonotactics is considered here to show the constraints the speakers of Tiv language face in the course of learning English Language as a second language (L2).

Phonotactics generally refers to the legal combinations and distributions of sounds in a language. In attesting to this, Crystal (2003:243) avers that ‘‘phonotactics is a branch of phonology that deals with restrictions in a language on the permissible combination of phonemes’’. This means therefore, that it (phonotactics) defines permissible syllable structure, consonant clusters and vowel sequences by means of phonotactical constraints. These phonotactic constraints are language specific and operate around the sonority hierarchy, stipulating that the nucleus has maximal sonority and that sonority decreases as you move away from the nucleus

THEORETICAL Studies

Optimality Theory

This research is anchored on the tenet of Optimality Theory. The major proponents of this theory in phonology are Prince and Smolensky (1993), Prince and McCarthy (1993) OT propose that a form is acted on simultaneously by a hierarchy of constraints that fall into the faithfulness constraints and markedness/well-formedness constraints. Faithfulness constraints are concerned with the output being faithful to the input while markedness constraints are concerned with making the output less marked. To McCarthy (2002:4), "It is a general model of how grammars are structured.'' He further explains historically that in 1991, Alan Prince and Paul Smolensky began presenting their work on a new approach to language. By 1993, this new approach had a name — Optimality Theory— and it became known through their widely-circulated manuscript *Optimality Theory: Constraint Interaction in Generative Grammar* (hereafter, Prince and Smolensky (2004)).

Blutner et al (2004) explain that OT dispenses with rules and proposes that the relationship between an underlying form and its surface realization is not derivational in nature. Instead of rules, OT proposes that underlying forms are linked directly to surface forms by means of a set of constraints. According to the Theory, there is an infinite number of candidates for the possible output of every form, but how the target is achieved, depends on the interaction of constraints. Hierarchy of well-formedness constraints and faithfulness constraints interact in order to eliminate candidates until the optimal candidate, or the candidate that has the fewest violations of the constraints emerges. Unlike rule-based phonology where various rules affect the input in a sequential order, in Optimality Theory all the constraints act upon the input simultaneously. The well-formedness constraints are at odds with the faithfulness constraints, and the ranking of the constraints determines which constraints are more violable. The optimal candidate may violate some of the constraints in the hierarchy, but it usually violates constraints that are ranked lower in the hierarchy, or it has fewer violations of higher ranked constraints than other candidates. The main proposal of OT is thus that, unlike in derivational theories of the type assumed and argued for in Generative phonology, phonological outputs are not derived from underlying representations through the interaction of ordered rules, instead outputs are freely generated and the actual output for any input within a particular language is the one which is the most optimal given the ranking of relevant constraints in that language (Chacha: 2009).

According to Archangeli (1997), Blutner and Zeevat (2004), Ellison (1994) and Holt (2003), there are some Components of an OT grammar. These include:

Input (Lexicon): The lexicon contains the lexical representations underlying forms of the morphemes and supplies the Input for the Generator (the phonological form of the morphemes is language-specific).

Generator: The Generator produces a potentially infinite number of Output candidates: Gen (Input) ⇒ {K1, K2, K3... Kn} and passes them to the Evaluator.

Constraints: A Constraint is a structural condition, which can either be satisfied by an Output-Form or it can be violated. There are three types of constraints: Faithfulness constraints, Markedness constraints and Alignment constraints

Markedness constraints require the Output form to fulfill certain well-formedness criteria. These may be positively or negatively formulated, so we distinguish between: Negative constraints: Vowels are not nasalized (*VNASAL)

Syllables have no coda (NOCODA or *CODA)

Coda obstruent's are not voiced (*VOICECODA)

Evaluator: The Evaluator consists of a set of ordered constraints: n {B1, B2...Bn} and evaluates the Output candidates with regard to their "harmony values" (the degree to which they comply with the constraints). It selects the optimal candidate. The selection is unique: there is one optimal candidate as Output: Eval ({K1, K2, K3... Kn}) ⇒ Output.

Output: This stipulates that If two candidates comply with several constraints, there must be further (lower-order) constraints which differentiate between the two and select one candidate. If two candidates cannot be differentiated, they are identical.

However, the crucial principles of OT for this research work are those outlined by McCarthy and Prince (1993) and Chacha (2009) as presented below.

- Violability: Constraints are violable, but violation is minimal.
- Ranking: Constraints are ranked on a language-particular basis; the notion of minimal violation is defined in terms of this ranking.
- Inclusiveness: The Constraints hierarchy evaluates a set of candidates that are admitted by very general considerations of structural well-formedness.

However, the analysis that will be done involve the following constraints:

*COMPLEX *CC= this constraint prohibits consonant clusters in the onset of a syllable and, practically motivates consonant cluster split; i.e. no complex syllable margins.

DEP-IO= output segments must have input correspondents (no epenthesis) i.e. this constraint prohibits the insertion of element not found in the input.

PEAK= this means that a syllable must have a vowel.

ONSET= this means that a consonant must precede the nucleus of a syllable.

MAX-IO= this constraint insists that input segments must have output correspondents (no deletion of segment is allowed)

MAX-V= input vowels must have output correspondents (no vowel deletion)

NO CODA= this markedness constraint enforces the adaptation of closed syllables i.e. syllables are open.

These constraints fit into two categories: well-formedness or markedness constraints and faithfulness constraints. Well-formedness constraints deal with how universally marked different forms are, such as consonant clusters in the onset and coda slots (Alezetes: 2004). Forms that are cross-linguistically avoided are considered marked. The other type of constraint is the faithfulness constraint, this focus on the output being faithful to the input.

Empirical Studies

The pronunciation of any non-native speaker of any language is promoted or impeded by a number of factors including, among others, age, mother tongue influence and personality.

It is clear that not much has being done on errors committed by Tiv learners of English as a second language, particularly, phonological system. However, Udu (2009) investigates the inter-language of Tiv learners of English as a second language. Focusing on the phonology of phonotactics, he observes that learners have difficulty in producing English initial consonant clusters having three members and final consonant clusters of three and four members. He pointed out the processes involved in the pronunciation of these clusters, namely, reduction, substitution and deletion.

In her attempt to identify problems that Tiv students of English encounter at initial stages, Dunstan (1969) presents four major areas of difficulty in his study. As far as Consonants are concerned, she presented two problematic issues. First, certain pairs are confused by learners such as /l/ and /r/ as in 'load' and 'road'; /ʧ/ and /ʃ/ as in 'chair' and 'share'; /ð/ and /θ/ as in 'then' and 'thin'; /f/ and /v/ as in 'half' and 'have'. Second, learners insert a short vowel to break down the long consonant clusters to pronounce them as in /sɪprɪŋ/ for 'spring'; /dikishenari/ for 'dictionary'; /kelase/ for 'class' Dustan1969: 186). In vowels, two types of difficulties are identified. First, certain diphthongs are replaced by other sounds due to L1 interference for example, /eə/ →/e/, /ʊə/ → /u:/, /ɪə/ → /ɪ:/, and /əʊ/→ /ɔ:/. Second, the distinction between certain pairs of vowels as in /ə/ and /e/ as in 'dictionary' and 'set'; /ʌ/ and /ɒ/ as in 'luck' and 'lock'; /əʊ/ and /ɔ:/ as in 'coat' and 'caught' (Elizabeth 1969: 189).

In study of pronunciation errors experienced by five Tiv learners of English as a L2 Udu (2009) observed difficulties in producing the voiceless alveolar lateral /l/, and the alveolar approximant /r/ especially what word environments are most difficult for participants. His results show that participants have difficulty with the two-targeted consonants, but the greatest is with /r/. The study also finds that the difficulty is not closely related to certain word positions; hence, all two sounds are often interchanged wherever they occur in a sentence.

Ikima (2011) in the study of nativization of English phonemes in Tiv observed that Tiv make use of markedness constraints more than faithfulness constraints. It shows that the tendency to break up consonant clusters is the ranking of CC rather the faithfulness constraints.

In order to see the influence of one's' L1 on the acquisition of the L2 pronunciation, Dustan (1969) identifies and analyzes the difficulties encountered by Tiv speakers when pronouncing English consonants. The participants were a group of Tiv speakers who came from different zones in Benue State with different colloquial Tiv backgrounds. All participants were in contact with the target language group and culture after the age of puberty for at least four years. The results show that five English consonants, namely, /ŋ/, /l/, /ʤ/, /ð/, and /r/ are identified as problematic for Tiv speakers. Dunstan also observes that L1 interference seems to be the major factor contributing to pronunciation problems that might differentiate one Tiv speaker from another, depending on the colloquial variety of Tiv they use.

Different people have worked on the Optimality Theory practically. In his work Sherrard **(**1997) explains that in OT, each output corresponds to a particular input form, but the constraints do not evaluate that input directly. Instead, the list of constraints, ranked appropriately for the language in question, evaluates a set of possible output candidates, as produced by 'a generation function GEN whose input is an underlying form and whose output is an infinite set of candidate forms derived from the input by unrestricted phonological operations' Anttila (1997:45) as quoted by Prince and Smolensky (1993:5) notes that "From this 'large space of candidate analyses', the constraint system identifies the preferred output by a parallel process of harmonic evaluation, EVAL." That is, all the candidate parses are simultaneously compared against the appropriately ranked constraint list to see which violates fewest; or more accurately, which violates fewer high-ranking constraints. Sherrard **(**1997) further explains that this process of evaluation can be displayed on a constraint tableau like the one in (1.1.), which sets out how each candidate fares with each constraint. The unique winning representation is known as the maximally harmonic analysis.

Table 1.1 Constraint tableau for /iu/, copied from Sherrard (1997:44–5):

Input: /iu/	*M/i	ONSET	NO COMLEX NUCLEUS	*M/u
☞ a. iw		*		*
b. ju	*			
c. i.u		**!		
d..iu		*	*!	

In the tableaux above, a constraint violation incurred by some representation is indicated by *, with '!' marking the violation fatal to that parse. The constraints *M/i and *M/u state that the high vowels are not permitted in syllable margins; that is, these vowels are preferentially nuclear. ONSET requires syllables to have an onset; and NO COMPLEX NUCLEUS permits only a single nuclear segment. Ranking of the constraints is determined by the recorded outcome: in other words, we know that *M/i outranks *M/u because the attested surface form in this hypothetical data set is [iw] (shown by the pointing hand (☞) in the tableau), and not [ju].

Kager (1999) in his explanation of this constraint based analysis presented an example using a word (tnagol) in Lenakel. The input (tnakol) has generated four candidates and has gone through evaluation under three constraints as seen in tableau 1.2 below.

Table 1.2 Constraint tableau for /tnakol/ copied from Kager (1999:117–8):

Input: /t-n-ak-ol/		*COMPLEX	DEP-IO	NO-CODA
a.	tna.gɔl	*!		*
b.	☞ tɨ.na.gɔl		*	*
c.	ɨt.na.gɔl		*	**!
d.	tɨ.na.gɔ.gɨ		**!	

The faithful non-epenthetic candidate (43a) is eliminated by un-dominated *Complex. Initial epenthesis, as in (43c), successfully avoids a complex onset, at the expense of only one violation of Dep-IO. But there is an even more successful competitor, which has both of these virtues, plus the additional advantage of having one fewer violation of No-Coda. This is (43b), where 'smart' epenthesis breaks up consonant clusters in such a way that both consonants form onsets in the output. Hence, candidate b is considered as the optimal candidate, because it has minimal violations and indicated by the pointing hand (☞).

Kager (1999) also uses the word */ak-dei/ as the input to* illustrate the application of vowel epenthesis in Japanese phonology, the input generates three candidates, all which have been evaluated by three constraints out of which one (c) emerges as the optimal candidate. The order of ranking for constraints will be: CODA-COND, IDENT-IO (Place) >> DEP-IO. He exemplified this using the Japanese word ak-dei*.* See the table below:

Table 1.3 Constraint tableau for /ak-dei/ copied from Kager (1999:133-4)

Input: /ak-dei/		CODA-COND	IDENT-IO (PLACE)	DEP-IO
a.	ak.dei	*!		
b.	ad.dei		*!	
c. a.ke.dei	☞			*

Consider three output candidates for the input /ak-dei/ in tableau (1.3). The fully faithful candidate (1.3a), which preserves place of articulation, while avoiding epenthesis, fatally violates Coda-Cond. To avoid such a violation, two strategies are considered, as represented by candidates (1.3b–c). Both violate some faithfulness constraints. The former, (1.3b), with a homorganic cluster, violates IdentIO (Place). Its competitor (1.3c), with an epenthetic vowel, violates Dep-IO. It is with this that the last candidate (c) is considered as the optimal candidate as indicated by the pointing hand (☞).

From the foregoing exposition it is clear that out of a certain number of candidates generated by an input, one violates constraints that are ranked lower in the hierarchy, or has fewer violations of higher ranked constraints than other candidates. Hence, considered as the optimal candidate and indicated with a pointing hand (☞).

Data Analysis

Below are the basic structure and phonetic variance in Tiv learners of English phonotactics;

Tiv Syllable Structure

Tiv words are predominantly a consonant-vowel (CV) syllable structure. The core syllable structures are; CV, V.N. and VN as can be found in the following examples.

CVe.g. /ku.le/ 'kule' to end (v)

/ci.le/ 'cile' island (n)

/fa/ 'fa' to know (v)

/to.ho/ 'toho' bush (n)

V e.g.'oo' sunshine (n)

'aa' to scratch (v)

'aa' to split (v)

N e.g./m/ m me (pronoun)

/m.ange/ mange? the sourness (adj)

/n.der/ nder to wake up (v)

VN/am.bi/ 'ambi' feaces (n)

/ama.hwegh/ 'amahwegh' other tribes (n)

/im.bi.shi/ 'imbishi' to press together (v)

The Tiv language does not have the closed syllable structure consonant-vowel-consonant (CVC). Tiv can therefore be described as an open syllabic language (NO CODA), which means that words in the language typically begin with consonants and end with vowel sounds.

English syllable on the other hand may be expressed by the formula: (C) (C) (C) V(C) (C) (C) (C). The following syllables exist in English:

- V as in 'eye'
- CV as in 'go'
- VC as in 'at'
- CVC as in 'man'
- CCV as in 'stay'
- VCC as in 'end'
- CCVC as in 'stop'
- CCVCC as in 'plant'
- CCCV as in 'stray'
- CCCVCC as in 'strand'
- CCCVCCC as in 'scripts'
- CVCCCC as in 'texts'

Syllable Restrictions in Tiv

The tendency to avoid consonant clusters is an important constraint (CON) in Tiv language. To this effect, when Tiv learners of English language come in contact with English syllables with consonant clusters, they find it difficult pronouncing it without the insertion of a vowel sound, hence, transferring this feature from their language to the L2. Tiv also has onset restriction for syllables i.e. most syllables have onset. In other words, no vowel can begin a syllable except at word initial stage.

More so, a small group of single voiced consonants may fill the coda slot. In other words, Tiv limits syllable codas to; v,m,n as well as l and r. words rarely end with diagraphs like gh and ng. Examples include;

- Words that end with the alveolar fricative /v/ tyav, gbev, kparev, twerv, tiv etc
- Words that end with syllable nasals /m/, /n/ and /ŋ/ like ibyen, apuuranam, nyam, tom etc
- Words that end with diagraphs like; icigh, ishigh, wegh, wang etc

In addition, Tiv also have pre-consonantal nasals that function as syllabic peak. The nasals that function as peak in Tiv are /m/ and /n/ which can be realized as follows:
mundu /m.un.du/ departure
mkoom /m.kÔÔm/ interdiction
nduran /n.du.ran/ rust
njartso /n.jaa.tso/ fare
mwanger /m.wan.ger/ lighting

Because Tiv language has these rules and it's native speakers use to them any time they come in contact with an English syllable that does not have, they tend to transfer them thereby impeding the learning of the English phonotactics.

Constraints Ranking in Tiv

A Constraint is a structural condition, which can either be satisfy by an Output-Form or it can be violated. Constraints are universal but languages of the world are known to rank them differently depending on a number of factors which could be either phonological or sociolinguistic. In the Tiv language, constraints are ranked in the following order;

PEAK >> ONSET >> *CC >> NOCODA>> MAX-IO >> DEP-IO >> MAX-V

The constraint peak is the highest in terms of ranking (ranking is indicated by left-to-right ordering of the constraints' columns). The evaluator (EVAL) will first eliminate from the competing candidates that violate this constraint. Next Eval will eliminate candidates that violate ONSET, then *CC and NOCODA in the order of which is the next high-ranked constraint until the remaining candidate, which does not violate any constraint or violates the least constraints in terms of ranking will emerge as the optimal candidate, which is usually indicated by the pointing hand. Therefore in Tiv language for example, an input string /kítsən/ is finally realized as /kicin/. Other examples include;

- Input: /dʌzn/.
- Output: /dƆzen/
- Input: /dikishənari/
- Output: /dikishenari/
- Input: /klǽs/
- Output: /kelase/
- Input: /brʌʃ/
- Output: /bulƆʃi/
- Input: /prəféssər/
- Output: /porofesƆ/

Constraints on Tiv Learners of English Phonotactics

The idea of phonotactics learning at the phonological level of language study considers well-formedness in the language of the learner. When a Ti speaker comes in contact with a word of another language, he/she discovers that he violates some constraints of syllable well-formedness. If and when this happens the speaker moves to fix the problem. He tries to ensure that the said word conforms to the phonological structure of his/her language i.e. he/she transfers those traits from his/her mother tongue. Tiv is not exception.

Vowel Epenthesis

This process involves the insertion of a vowel between two consonants or after consonant in a syllable final position. Although epenthesis is a violation of the faithfulness constraint because the epenthetic segment has no counterpart in the input, it fulfills the markedneesss. A vowel is inserted between the consonant clusters. Example

- Flask- flǽskfe.la.se
- Bread-bredbe.re.di
- Matron-meitrənme.te.ron
- Spray-spreise.pe. rei
- Mattress-mætrəsma.te.ra.se

Let's now consider how OT accounts for these in a tableau from using the tableau conventions presented below;

Tableau conventions

- ☞ indicates the optimal candidate
- * marks a violation
- *! Marks a fatal violation and thus elimination

The tableau (a standard expositional device in OT) in figure below illustrates output selection for the input /sækrəmənt/ in Tiv language.

Tableau 1

Input: /sækrəmənt/		PEAK	ONSET	*CC	NOCODA	MAX-IO	DEP-IO	MAX-V
a.	sa.kra.ment			*!	*!			
b.	sa.kra.me			*!		*		
c.	sa.ke.ra.me.nt	*!				*	*	
d.	☞sa.ke.ra.men.tu						**	
e.	sak.er.am		**!			*	**!	*
f.	a.ke.ra.men		*!			*		
g.	sak.ra.men				*!		*	

Each of the output seven of candidates in tableau 1 is flawed: candidate '*a*' the most faithful has a consonant cluster; violating the markedness constraint *CC, as indicated by the asterisk at the intersection of *CC's column and *a*'s row. '*a*' also end with a consonant, violating the markedness constraint of open syllabicity (NOCODA). Candidate 'd' is the optimal candidate not because it has committed the least number of violations but rather it incurs minimal violation in terms of ranking. Candidate '*f*' is the worst candidate. It is first eliminated right from dominant PEAK and ONSET constraints. Next candidate c is eliminated because it violates constraints on a lesser scale, but if compared with '*d*' it has violated constraints on a higher rank.

Tableau 2

Input: /mætrəs/		PEAK	ONSET	*CC	NOCODA	MAX-IO	DEP-IO	MAX-V
a.	mǽtrəs			*!	*			
b.	ma.tr.es	*!	*	*	**			
c.	mat.te.res				**!		*	
d.	ma.te.re					*!		
e.	☞ma.te.ra.se						**	
f.	Ma.ter.ase		*!		*		**	

In tableau 2 above, candidate *'b'* is the worst hit and thus the first to be eliminated by Eval. Candidate '*a' the* most faithful violates the *CC constraint, it further violates the NOCODA constraint. Candidate '*e*' then emerges as the optimal candidate because, the only constraint it violates is the DEP-IO, which it violates to avoid violating the higher constraint *CC by inserting a vowel to break up the cluster (tr) and to also avoid the NOCODA constraint.

Tableau 3

Input: /dikishənari/		PEAK	**ONSET**	***CC**	**NOCODA**	**MAX-IO**	**DEP-IO**	**MAX-V**
a.	dik.shən.ari		*!		*!			
b.	dik.shen.ari		*!		*!			
c.☞di.ki.she.na.ri							*	
d.	di.kshe.na.ri			*!				
e.	di.ki.shen					**		

In tableau 3, the optimal candidate emerges at MAX-IO. Candidate '*c*' wins despite the fact that it violates DEP-IO because unlike the other four candidates, it does not violate the first five constraints in the hierarchy.

Tableau 4

Input: /klæs/		**PEAK**	**ONSET**	***CC**	**NOCODA**	**MAX-IO**	**DEP-IO**	**MAX-V**
a.	klas			*!	*			
b.	kla.se			*!			*	
c.	ke.las				*!		*	
d.	☞ke.la.se						*	
e.	Kel.as		*!		*		*	
f.	Ke.las				*!		*	
g.	K.la.se	*!			*			

In tableau 4, the candidate 'd' is the only candidate that satisfies almost all the most important constraints, all the other candidates violate the markednes constraints in one way or the other. While candidate 'a' is the most faithful, this faithfulness to the consonant cluster in the input causes it to violate *CC.

Tableau 5

Input: /speliŋ/		**PEAK**	**ONSET**	***CC**	**NOCODA**	**MAX-IO**	**DEP-IO**	**MAX-V**
a.	Speliŋ			*!	*			
b.	su.pe.li.ŋ	*!					*	
c.	sp.e.li		*!	*				
d.	☞su.pe.li						*	*
e.	Spel.in		*!	*	**	*		
f.	Su.pel.ŋ	*!			**	*	*	*
g.	Sup.el.iŋ		**!		***		*	

In tableau 5, candidate 'd' emerges the optimal candidate. It does not violate the markedness constraint PEAK because all its syllables contain vowel segment, it does not violate ONSET because the (s), (p) and (l) function as onsets for all the three syllables. There is no consonant cluster so it does not violate the *CC constraint. The candidate has violated two faithfulness constraints MAX-IO and DEP-IO by deleting the final nasal sound (ŋ) and by inserting a vowel to break up the cluster (sp) respectively. Candidate 'e' is the worst hit because; (i) a vowel is functioning as the onset of a syllable. This is a violation of the markedness constraints *CC and because it has a consonant cluster. Both syllables are also closed violating the NOCODA constraints.

Summary of Findings

The source of any error in language learning can be overgeneralization, omission - as a learning strategy, spelling-to-sound rules, and the stage of development or learner's mother tongue interference. Learners of any language, whether L1 or L2, form hypotheses about the rules of the language they are learning. In an L2 situation, they sometimes rely on their L1 background to form such hypotheses that will result in successful or erroneous structures, depending on the feature or rule being transferred.

The study registered some specific findings: Tiv learners of English violate the phonotactic rules of the language in realizing consonant clusters, assimilation and vowel harmony. The study

Observed that the Tiv learners of English language experiences difficulties realising English syllables with consonant clusters, they find it difficult pronouncing it without the insertion of a vowel sound, hence, transferring this feature from their language to the L2. Tiv also has onset restriction for syllables i.e. most syllables have onset. In other words, no vowel can begin a syllable except at word initial stage.

CONCLUSION

The ultimate goal of most second language learners is to attain native like fluency. They want to be indistinguishable from native speakers. However, for many learners, this dream has remained a dream especially in the area of pronunciation as native speakers usually identify individuals as non-native speakers because of their accents. However, a large number of second language.learners believe that the main difficulty they encounter when speaking the second language is pronunciation and consider this difficulty as the main source of their communication problems.
The masterpiece indicated the some areas of constraint experienced by Tiv learners of English. The work will be of immense importance to language studies and language learning and teaching.

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