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## **Autosegmental Representation of Epenthesis in the Spoken French of Ijebu Undergraduate French Learners in Selected Universities in South-West of Nigeria**

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### **Abstract**

Insertion of vowels and consonants is a phonological process in language. Existing studies have examined vowel insertion in several languages and dialects with little attention paid to the spoken French of Ijebu Undergraduates. Therefore, this paper examined vowel insertion in the spoken French of 50 Ijebu Undergraduate French Learners (IUFLs) in Selected Universities in South West of Nigeria. The data collection for this study was through tape-recording of participants' production of 30 sentences containing both French vowel and consonant sounds while Goldsmith's Autosegmental phonology blended with distinctive feature theory was used to analyse instances of insertion in the data collected such as i-epenthetic and u-epenthetic at the initial, medial and final positions in the spoken French of IUFLs.

**Key words:** IUFLs, Epenthesis, Ijebu dialect, Autosegmental phonology

### Introduction

Insertion is a phonological process whereby an extraneous element not present originally is introduced into the utterance usually to break up unwanted sequences. Consonant insertion is not common in languages but vowel insertion is a common occurrence (Oyebade 1998:65, Iyiola 2014:1). For instance, the Ibos insert the vowel /i/ in words like “quelque chose /kɛlikfoz/, peut-être /pøtɛtʁɛ/” Many languages insert a so-called *prop vowel* at the end of a word to avoid the loss of a non-permitted cluster. This cluster can come about due to a change in the phonotactics of the language so that final clusters are no longer permitted. Another possibility is when a sound change deletes vowels at the end of a word, a very common sound change. This may well produce impermissible final clusters (Oyebade 1988). In some cases, the problem was resolved by allowing a resonant to become syllabic or inserting a vowel in the middle of a cluster; e.g. Proto-Germanic *akraz* "field, acre" > Gothic *akrs* (syllabic /r/), but Old English *æcer* (insertion of vowel). In the Gallo-Romance languages, however, a prop vowel was added, e.g. MONSTRU > /monstr/ > /monstrə/ (French *montre* "watch" (clock)) It could also happen in the middle of a word and at the end of a word as it was discovered in the course of this research. Existing studies have examined vowel insertion in several languages and dialects with little attention paid to the spoken French of Ijebu Undergraduates. Therefore, this paper examined vowel insertion in the spoken French of 50 Ijebu Undergraduate French Learners (IUFLs) in Selected Universities in South West of Nigeria with a view to establishing the dominance of i- and u-epenthesis in the spoken French of the IUFLs.

### Epenthesis in Phonology

In phonology, epenthesis is the addition of one or more sounds to a word, especially to the interior of a word. Epenthesis may be divided into two types: excrescence, for the addition of a consonant, and anaptyxis for the addition of a vowel. Epenthesis of a vowel is also known by the Sanskrit term svarabhakti. Some accounts distinguish between "intrusive vowels", vowel-like releases of consonants as phonetic detail, and true epenthetic vowels, which are required by the phonotactics of the language and acoustically identical with phonemic vowels (Stevens 2000). At the end of a word, many languages insert a so-called prop vowel at the end of a word to avoid the loss of a non-permitted cluster. This cluster can come about due to a change in the phonotactics of the language so that final clusters are no longer permitted. Something of this sort happened in Sanskrit, with the result that a new vowel /i/ or /a/ was added to many words (Selkirk 1980:107-129). Another possibility is when a sound change deletes vowels at the end of a word, a very common sound change. This may well produce impermissible final clusters. In some cases, the problem was resolved by allowing a resonant to become syllabic or inserting a vowel in the middle of a cluster;

e.g. Proto-Germanic *akraz* "field, acre" > Gothic *akrs* (syllabic /r/), but Old English *æcer* (insertion of vowel). In the Gallo-Romance languages, however, a prop vowel was added, e.g. *MONSTRU* > /monstr/ > /monstrə/ (French *montre* "watch" (clock) (Siegel 1991:664-674). In the middle of a word, examples of this kind are common in many Slavic languages, which showed a preference for open (vowel-final) syllables in earlier times. An example of this kind is the Proto-Slavic form *\*gordŭ* ("town"), in which the East Slavic languages inserted an epenthetic vowel to break the cluster -rd-, resulting in *\*gorodŭ*, which became *город* (*gorod*) in modern Russian and Ukrainian. The other Slavic languages instead metathesised the vowel and the consonant, creating *\*grodŭ* (Polish *gród*, Czech *hrad*, Serbo-Croatian *grad*) (Padgett 2003:39-87).

Other examples exist in Modern Persian, where former word-initial consonant clusters (which were still extant in Middle Persian) are regularly broken up: Middle Persian *brādar* > Modern Persian *barādar* "brother", Middle Persian *stŭn* > Early New Persian *sutŭn* > Modern Persian (Iran) *sotŭn* "column"; modern borrowings are also affected. At the beginning of a word, in the Italo-Western languages, an epenthetic vowel was inserted at the beginning of any word that began with /s/ and another consonant: Latin *spatha* "sword" > Spanish/Portuguese *espada*, Catalan *espasa*, Old French *espede* > modern *épée*. As a poetic device, an example in an English song is "The Umbrella Man", where the meter requires "umbrella" to be pronounced with four syllables, *um-buh-rel-la*, so that "any umbrellas" has the meter *ány úmberéllas*. The same thing occurs in the song *Umbrella*.

As a grammatical rule, epenthesis often breaks up a consonant cluster or vowel sequence that is not permitted by the phonotactics of a language. Sporadic cases can be less obviously motivated, however, such as *warsh* 'wash' with an extra *r* in some varieties of American English or *Hamtramck* being pronounced 'Hamtramick' as if there were an extra *i*. Regular or semiregular epenthesis commonly occurs in languages which use affixes. For example, a reduced vowel /i/ is inserted before the English plural suffix *-z/* and the past tense suffix *-d/* when the root ends in a similar consonant: *glass* → *glasses* /'glæsiz/ or /'glɑ:siz/; *bat* → *batted* /'bætɪd/. This is again a synchronic analysis, as the form with the vowel is the original form and the vowel was later lost in many, but not all cases. When borrowing words, vocalic epenthesis typically occurs when words are borrowed from a language that has consonant clusters or syllable codas that are not permitted in the borrowing language, though this is not always the cause (Selkirk 1986:371-405). Languages use various vowels for this purpose, though schwa is quite common when it is available. For example, Hebrew uses a single vowel, the schwa (though pronounced /ɛ/ in Israeli Hebrew). Brazilian Portuguese uses /i/, which in most dialects triggers palatalization of a preceding /t/ or /d/, e.g. "bullying" > ['buʎiŋi ~ buʎj]; "nerd" > /nɛɾdʒi/; "stress" > /stɾɛsi/ (which became *estresse*); "McDonald's" > /makidonaudʒi/ ~ [mɛk'donɛwdʒis] with normal vocalization of /l/ to /u/. Most speakers pronounce borrowings with spelling pronunciations, while some others try to

approximate the nearest equivalents in Portuguese of the phonemes used in the original language. Compare "anime" /animi/ with *animê* /anime/. Classical Arabic does not allow clusters at the beginning of a word, and typically uses /i/ to break up such clusters in borrowings, e.g. /sira:tʕ/ "street" < Latin STRĀTA. Spanish does not tolerate clusters at the beginning of a word with an /s/ in them, and is well known for adding *e-* to such words, e.g. *espáis* < "spice", *estrés* < "stress".

In informal speech, epenthesis most often occurs within unfamiliar or complex consonant clusters. For example, the name *Dwight* is commonly pronounced with an epenthetic schwa between the /d/ and the /w/, and many speakers insert schwa between the /l/ and /t/ of *realtor*. Epenthesis is sometimes used for humorous or childlike effect. For example, the cartoon character Yogi Bear says "pic-a-nic basket" for "picnic basket." Another example is to be found in the chants of England football fans in which England is usually rendered as [ˈɪŋɡələnd], or the pronunciation of "athlete" as "ath-e-lete". Some apparent occurrences of epenthesis, however, have a separate cause: the pronunciation of *nuclear* as *nucular* arises out of analogy with other *-cular* words (*binocular*, *particular*, etc.), rather than epenthesis. Certain registers of colloquial Brazilian Portuguese sometimes have [i] between consonant clusters, except those formed with /l/ (*atleta*), /r/ (*prato*) or syllable-ending /s/ (produced [ʃ] in a number of dialects, always postalveolar in *fluminense* and *florianopolitano* and before voiceless consonants and not in the end of the word in *nordestino*, rare feature in a few others) (*pasta*), so that words like *tsunami*, *advogado* and *abdômen* are pronounced /tisunami/, /advogadu/ and [abi'domẽj]. Some dialects also use [e] for voiced consonant clusters, which is deemed as stereotypical of the lower classes, those which came from rural flight and the internal migrations in cities such as Rio de Janeiro, Brasília and São Paulo. In Spanish it is usual to find epenthetic or svarabhakti vowels in the groups of plosive + flap + vowel or labiodental fricative + flap + vowel, normally in non-emphatic pronunciation: For instance in pronouncing *vinagre* instead of the usual [bi'naɣre] we find [bi'nay(ə)re] Siegel 1991).

In Finnish, there are two epenthetic vowels and two nativization vowels. One epenthetic vowel is the preceding vowel, found in the illative case ending *-(h)\*n*, e.g. *maahan*, *taloon*. The second one is [e], connecting stems that have historically been consonant stems to their case endings, e.g. *nim+n* → *nimen*. In standard Finnish, consonant clusters may not be broken by epenthetic vowels; foreign words undergo consonant deletion rather than addition of vowels (e.g. *ranta* ("shore") from Germanic *strand*). However, modern loans may not end in consonants. Even if the word, such as a personal name, is not loaned, a paragogic vowel is needed to connect a consonantal case ending to the word. The vowel is /i/, e.g. *(Inter)net* → *netti*, or in the case of personal name, *Bush* + *-sta* → *Bushista* "about Bush". Finnish has moraic consonants, of which L, H and N are of interest in this case. In standard Finnish, these are slightly intensified when preceding a consonant in a medial cluster, e.g. *-hj-*. Some dialects,

like Savo and Ostrobothnian, employ epenthesis instead, using the preceding vowel in clusters of type *-lC-* and *-hC-*, and in Savo, *-nh-*. (In Finnish linguistics this phenomenon is often referred to as *švaa*; the same word can also mean schwa, but it is not a phoneme in Finnish, so usually there is no danger of confusion.) For example, *Pohjanmaa* "Ostrobothnia" → *Pohojammaa*, *ryhmä* → *ryhymä*, and Savo *vanha* → *vanaha*. Ambiguities may result: *salmi* "strait" vs. *salami*. (An exception is that in Pohjanmaa, *-lj-* and *-rj-* become *-li-* and *-ri-*, respectively, e.g. *kirja* → *kiria*. Also, in a small region in Savo, the vowel /e/ is used in the same role). However, our focus in this paper is the instances of i and u-epenthetic in the spoken French of the IUFLs.

### Vowel Epenthesis in Spoken Ijebu

A language may add vowel as segment to break an unallowed cluster or make a foreign word conform to the phonology of the host language. This is known as epenthesis or insertion of vowel. Ijebu insert a vowel especially /i/ or /u/ in between consonant and add a vowel at the end of every word to conform to the preferred syllable structure of Ijebu. For example:

ENGLISH	IJEBU DIALECT	GLOSS
/brick/	/biriki/	brick
/gri:s/	/giris/	grease
/fridz/	/firiiji/	fridge
/milk/	/miliiki/	milk
/blu:/	/buluu/	blue
Sku:l/	/sukuru/	school
/fillip/	/filipi/	Phillip
/kuk/	/kuku/	cook

Final vowel epenthesis also takes place in Ijebu dialect. All lexical items must end in vowels and this condition does not exclude loan words. Since Ijebu is an open syllable dialect, a final vowel is inserted at the word final position of a loan word to conform to the open syllable structure of Ijebu.

ENGLISH	IJEBU DIALECT	GLOSS
/bleid/	/biledi/	blade
/trauzaz/	/turɔsa/	trouser
/glaub/	/gilobu/	globe
/blɔ:k/	/bulɔki/	block
/bread/	/buredi/	bread

Ijebu dialect has a slight difference from Standard Yoruba. For instance, Vowel /u/ cannot start the lexical item of Standard Yoruba unlike in Ijebu dialect where vowel /u/ can appear in some of its lexical items at word initial. E.g. /Ule/ 'house', /Uto/ 'saliva'

### **Methodology**

The participants for this study were purposively selected from Olabisi Onabanjo University, Ago Iwoye, Ogun State, Osun State University, Ikire Campus, Osun State and Tai Solarin University of Education, Ijebu-Ode, Ogun State. The participants were selected from 400 levels because it is believed that they would have attained a considerable level of proficiency in French language. The data collection was through tape-recording of participants' production of 30 sentences containing both French vowel and consonant sounds. Scoring of correct and incorrect productions were done and analysed statistically by converting to percentages. Having obtained their consent, the subjects chosen for this study are 50 undergraduate learners of French of Ijebu origin in Ogun State of Nigeria. They are all 400 level students: 19 from Olabisi Onabanjo University, 15 from Tai Solarin University of Education, 10 from Osun State University and 6 from the University of Ibadan. We have decided to choose our informants from 400 levels because it is believed that they would have attained a considerable level of proficiency in French language. We have chosen our informants from these Universities because through our research, we have discovered that students who are natives of Ijebu prefer to attend their state Universities.

### **Autosegmental Phonology and Data Analysis**

The analysis in this aspect shall be based on two phonological theories namely: Distinctive Feature Theory as propounded by Chomsky and Halle (1968) and Autosegmental Theory of Phonology as propounded by Goldsmith (1976; 1990; 1993; 1999) which will be modified since French is not a tonal language like most African languages. It must be pointed out that Autosegmental model is a direct outgrowth of the generative research programme developed in Chomsky and Halle (1968), Sound Pattern of English (SPE) - (Goldsmith 1990:217). Using the distinctive features that a phoneme is made up will help to treat the process of denasalisation in this research.

Distinctive Feature Theory (henceforth DFT) assumes that a phoneme is divisible into indivisible elements. That is, a phoneme is a bundle of distinctive features. DFT has its genesis in the works of Trubetzkoy (1939) and Jakobson, Fant and Halle (1952). Chomsky and Halle (1968) reviewed these works and proposed a major revision of the theory by replacing acoustically-defined phonological features with a set of features that have articulatory correlates in most cases (Katamba 1992: 42). The distinctive features are grouped as Major class features, Cavity features, Tongue body features, Tongue root features, Laryngeal features, Manner features and Prosodic features. (Chomsky & Halle 1968; Katamba 1992; Salawu 2001; 2005; 2007).

In order to put the analysis into a graphic representation form, some of the views of Autosegmental model shall be employed. Goldsmith (1990: 8) explains the different approach of this theory from the generative method of representation.

Autosegmental representation differs from familiar generative and traditional phonemic representation in that it consists of two or more tiers of segments. In the picture given us by classical generative phonology - and, indeed, most theories of phonology and phonological representation – phonological representations consist of a string of segments. In autosegmental representation, however, we posit two or more parallel tiers of phonological segments. Each tier itself consists of a string of segments, but the segments on each tier differ with regard to what features are specified in them.

Within this theory, each tier consists of segments that are independent of the other segments in another tier. Each tier is associated with the other level of tier through the means of association lines which are governed under the Association Convention though modified by us to effect the principle of well-formedness. In this research, we shall have three types of tiers due to the modification namely CV tier, Insertion tier, Segmental tier while the Tonal tier is excluded in the analysis of the data. The full specification of the distinctive features for the French vocalic segments involved in insertion of the data collected is presented in the table below:

Instances of vowel insertion at the initial, middle and end of some words in the reading materials used during the course of our field work and these are shown in the table below:

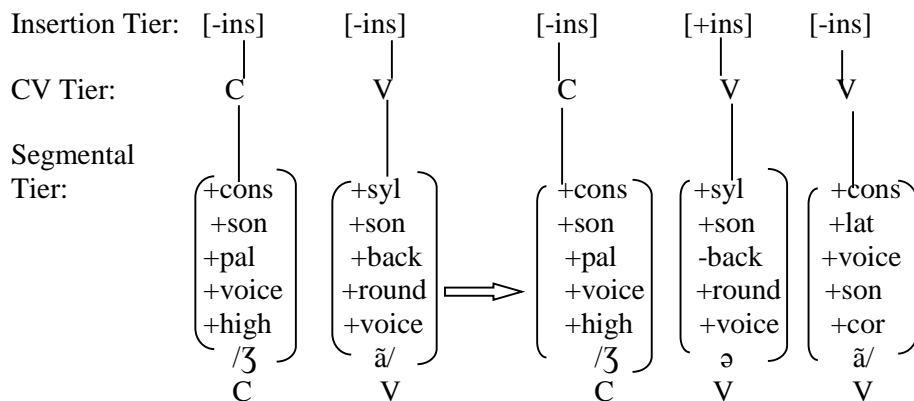
Gloss	Correct phonetic representation	Variables	Variants by respondents
Jean (Nom)	/ʒã/	/ã/	/ʒãã/
Père	/pɛR /	/p/	/piɛR/
Chaise	/ʃɛz/	/ʃ/	/ʃiɛz/
Oiseau	/wazo/	/w/	/uwazio/
Lecteur	/lektœR/	/œ/	/lektioœR/
Chauve	/ʃov/	/v/	/ʃovɛ/
Fille	/fiʝ/	/ʝ/	/fiʝi/
Famille	/famij/	/j/	/famiji/
Signe	/sij/	/j/	/sijni/, /sijñ/
Digne	/diʝ/	/j/	/diʝni/, /diʝñ/
Pagne	/paʝ/	/j/	/paʝni/, /paʝñ/
Ligne	/liʝ/	/j/	/liʝni/, /liʝñ/
Mangeons	/mãʒõ/	/ʒ/	/mãʒiõ/

Pegner	/pɛɲɛ/	/ɛ/	/pɛɲɛ/
Joyeuse	/ʒwajɸz/	/w/	/ʒuwaɸz/
Gueux	/gɸ/	/ɸ/	/guɸ/, /gɸɸ/
Mouchoir	/muʃwaR/	/w/	/muʃuwaR/

From the table above, 72% of the IUFLs inserted the vowel /i/ in pronunciation of words like “une /ɥn/” at the initial position thereby changing to “/iɥn/”. Moreover, from the table above, the IUFLs did not only demonstrate the i-epenthetic at the initial position of the pronunciation of French words but also at the final position. Examples are: “Fille/fij/ changing to /fiji/, Famille /famij/ changing to /famiji/ and Signe /sijn/ changing to /sijni/. Also, 78% of the participants inserted the vowel /u/ in pronunciation of words like /wazo/ at the initial position thereby producing /uwazo/ instead of /wazo/, joyeuse /ʒwajɸz/ was pronounced as /ʒuwaɸz/. In addition, the IUFLs inserted /u/ at the medial position in words like Mouchoir /muʃwaR/ changing to /muʃuwaR/, Gueux /gɸ/ was produced as /guɸ/. All this occurred because Ijebu dialect does not tolerate consonant clusters.

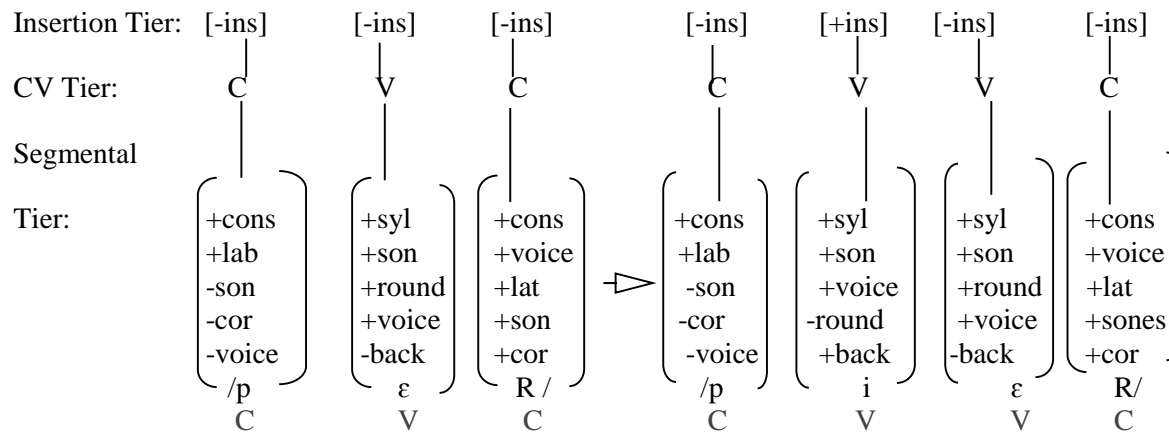
**Autosegmental Analysis of instances of vowel insertion from the data**

1. Jean /ʒã/



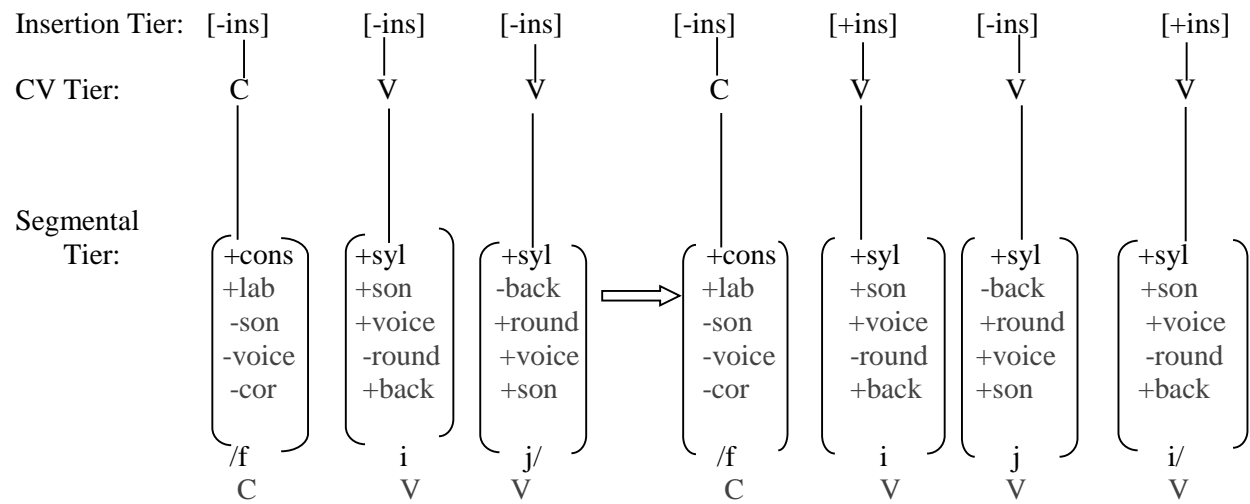


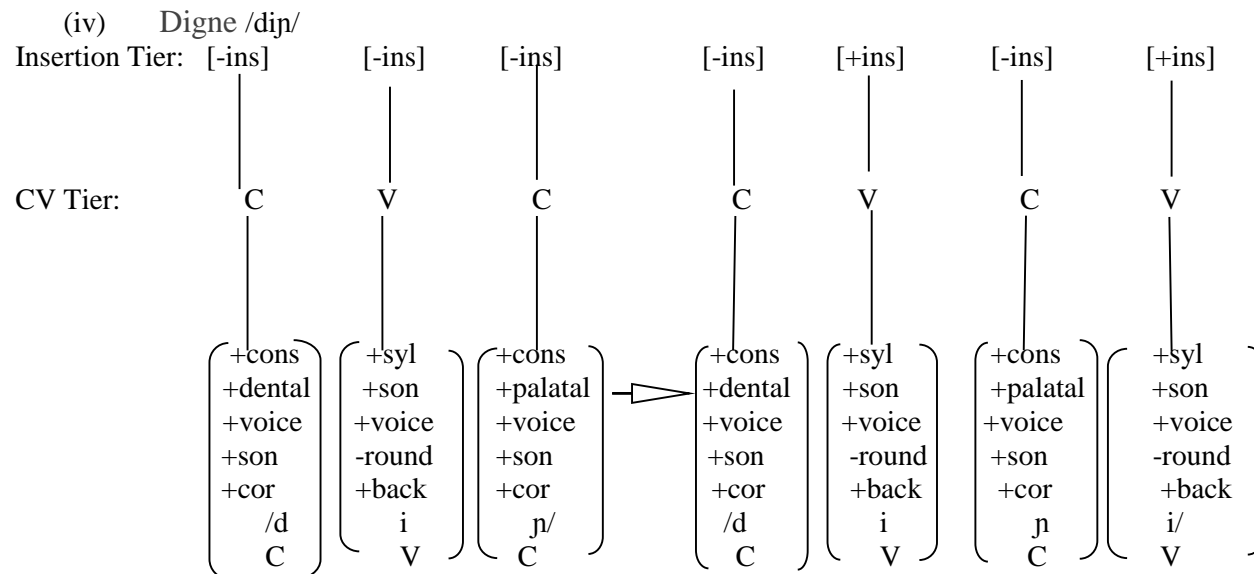
(ii) Père /pɛR/



The two figures above (i & ii) represent instances of autosegmental analyses of vowel insertion, that is, i-epenthetic at the initial position.

(iii) Fille /fij/

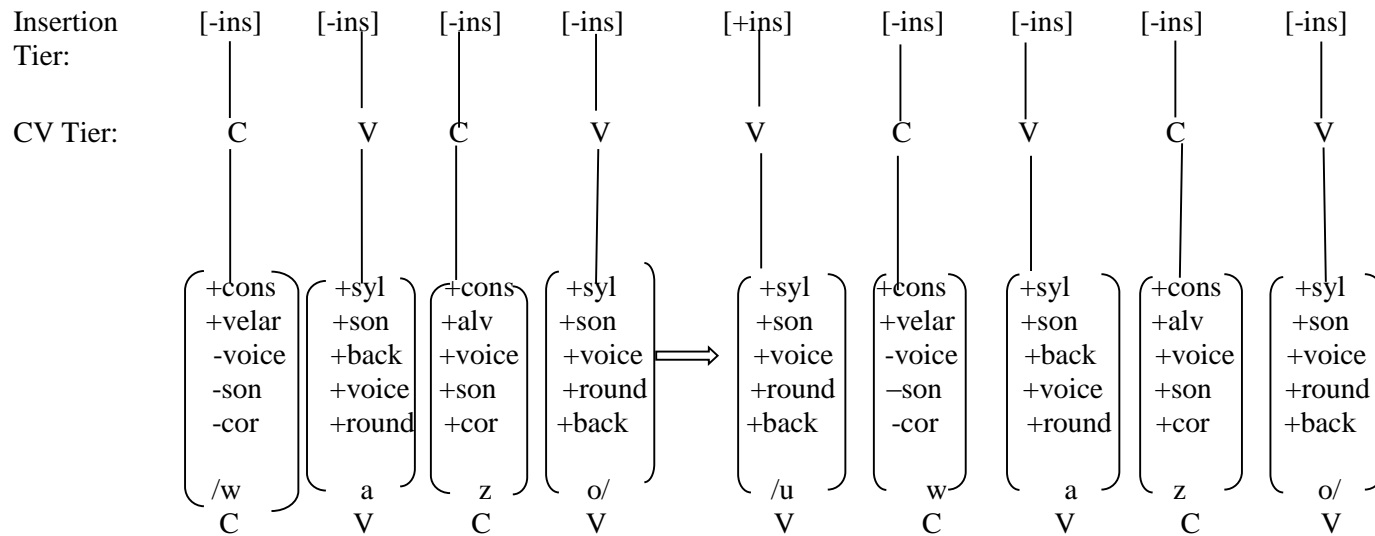




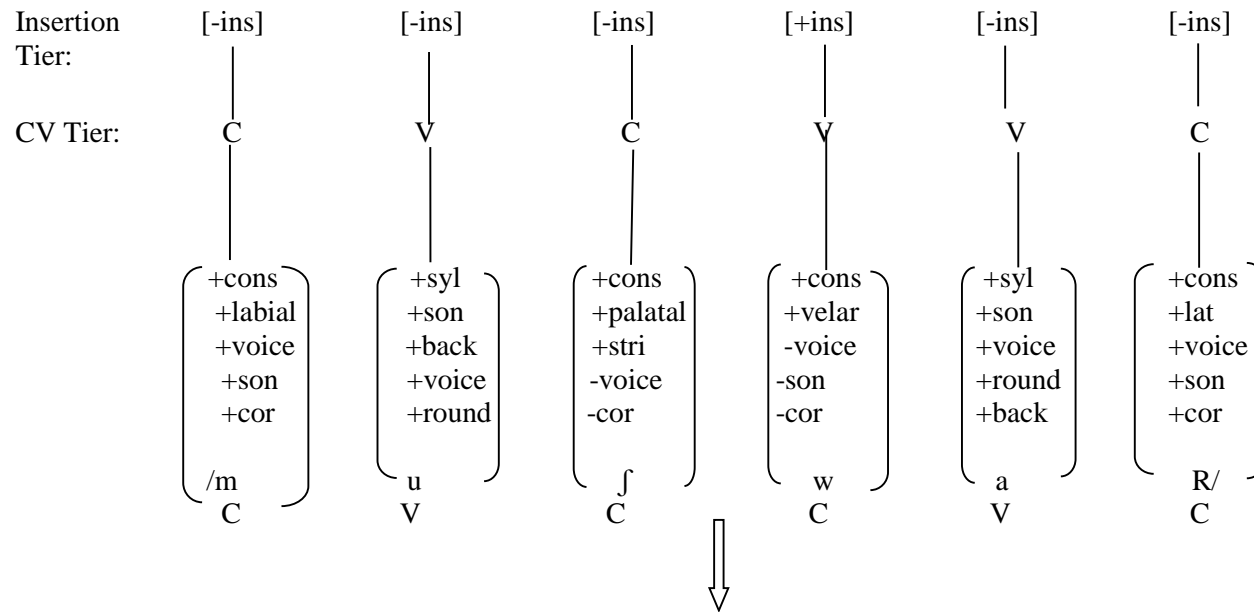
The above two figures (iii & iv) represent instances of autosegmental analyses of vowel insertion, that is, i-epenthetic at the final position.

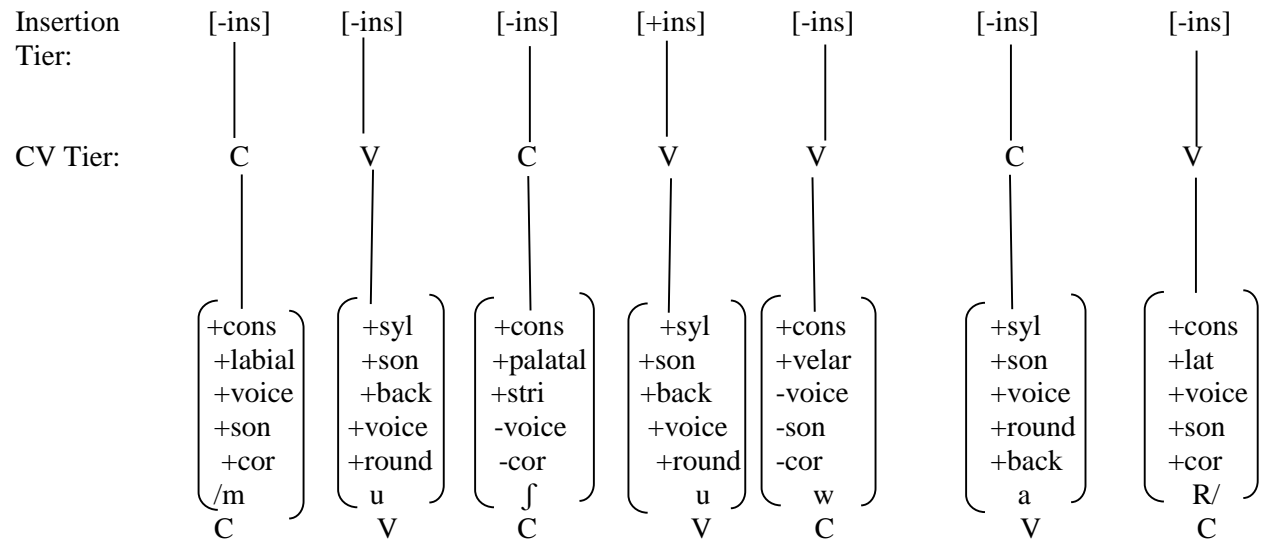
The two figures (v & vi) below represent instances of autosegmental analyses of vowel insertion, that is, u-epenthetic at the initial and medial positions in the spoken French of the IUFLs.

(v) Oiseau /wazo/



(vi) Mouchoir /muʃwaR/





## Conclusion

Paragoge, a type of epenthesis which is most commonly vocalic epenthesis and which is the addition of a sound to the end of a word due to nativization in the pronunciation of IUFLs. Also, insertions of vowels /ə/, /i/, /u/ and /ɛ/ were discovered at the initial and medial positions of the pronunciation of the participants as shown in the above table. This is notable in the pronunciations of foreign language by the Ijebu. However, we would like to suggest that, the teaching of phonetics and phonology of French language be emphasized especially in the Anglophone setting for better mastery of speech production of French sounds and words though it may not be totally possible to eradicate errors in speech production but it could be minimized.

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