An Investigation into Some Word Stress Placement Errors made by Congolese French Speakers learning English at the University of Lubumbashi, Democratic Republic of Congo

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 Abstract

This article investigates some word stress placement errors made by Congolese French speakers learning English, more specifically students from the English Department of the University of Lubumbashi, in the Democratic Republic of Congo (DRC). Based on a sample of data collected through observation, eavesdropping and a pronunciation test backed by an interview, the study is aimed at identifying some recurrent stress placement errors made by students in order to trace back their major sources and suggest remedial strategies likely to help them improve their pronunciation. Findings have revealed that these stress errors find their sources mainly in interlingual interference from French, intralingual interference within English, learners' reliance on their intuition, lack of theoretical knowledge of basic rules on stress placement, and the context of learning with the teacher considered as the model of pronunciation for learners. Remedial teaching and learning strategies include empowering both teachers and learners with theoretical knowledge on stress placement, practical exercises on syllable identification and division, discriminating stressed syllables from unstressed or weak ones, repetition of the teacher's model in chorus and individually, stress placement exercises on polysyllabic words, downloading videos with lessons on authentic stress practice by native speakers on You Tube Channel, scaffolding learners' efforts through having them read aloud sentences containing polysyllabic words in connected speech, and encouraging learners 'self-continued instruction in language laboratories and from video and audio lessons . Findings have provided some insights for pedagogical implications based on a revisitation of methodologies in the teaching of English with a focus on the integration of pronunciation within other aspects of language like vocabulary, grammar, speaking, reading, and writing.

Keywords: investigation- stress placement errors- Congolese French Speakers-learners of English

1. Introduction

In today's increasingly globalised world, English has undoubtedly become the language of global communication so that it is often referred to as a global language (Crystal, 2003). Indeed, English is now spoken by far more non-native speakers using a variety of accents than native speakers. Pronunciation skills are, therefore, deemed critical for clear, effective and successful global communication owing to the variety of accents used all over the world referred to as World Englishes (Kachru, 1992). This is the reason why the relevant and realistic goal of the teaching and learning of English pronunciation should aim at achieving mutual and international intelligibility with all the people who speak English, rather than at targeting to reach a native-like pronunciation. Effective pronunciation instruction/teaching should, therefore, involve the concern of helping learners of English negotiate the multiple native and non-native accents that they hear.

It is well known that English pronunciation relies very much on two crucial features, namely correct articulation of sounds and correct placement of stress, two features upon which clarity in speech and intelligibility in communication depend. For the purpose of the present study, stress placement errors in polysyllabic words are as important as those errors resulting from a failure to pronounce vowels and consonants well, since such errors may lead to misunderstandings and unintelligibility. In case someone places the stress on the wrong syllables, it may be difficult for other people to understand him even if the sounds are very well pronounced because the words will sound strange, unnatural, confusing and misleading, since, in English, listeners rely very much on word stress and context in order to recognise words. The fact is that, in English, it is quite impossible to start pronouncing words correctly if we have not predicted the place where the stress must fall.

It is in this vein that Martinet (1980) asserts that: ''*un mot mal accentué n'est pas compris même si les phonèmes qui le composent sont prononcés à la perfection*''. (a wrongly stressed word is not understood even though the phonemes composing it are perfectly pronounced).

Similarly, Roach (2009) states that '' incorrect placement of stress is a major cause of intelligibility problems for foreign learners and is, therefore, a subject that needs to be treated seriously''.

Research also shows that incorrectly stressed words can furthermore cause misunderstandings, confusion, embarrassment, frustration, anxiety and even(mental)stress.

In addition, in English, vowel quality is frequently influenced by the presence or absence of stress. Stress can also affect consonants, specifically plosives. Incorrect word stress placement also has an impact on the rhythm that is made of a sequence of stressed and unstressed syllables.

Although there are rules that govern stress placement in English, it is not an easy task to master them all with their exceptions. Hence, Congolese French speakers learning English are faced with the challenge of the apparent instability and inconsistency of stress placement in polysyllabic words and a plethora of rules with their exceptions so that they very often have to rely on their intuition. The present study is, therefore, aimed at identifying the sources of errors in stress placement in a sample of polysyllabic words and at suggesting some remedial strategies in order to help these learners improve their pronunciation**.**

2. Theoretical considerations on stress placement in English pronunciation

According to Daniel Jones, quoted in Adamczewski and Keen (1973: 136), stress is defined as ''a degree of force with which a sound or syllable is uttered''. In other words, stress is the relative loudness (force, intensity) or prominence with which a syllable is uttered.

In English, the syllable is considered as the basic unit of pronunciation in polysyllabic words. In a normal English sentence, certain words are stressed, while other words are unstressed. Content-words (nouns, verbs, adjectives, adverbs, and demonstratives) are normally stressed, while function words, or structure-words, are normally unstressed. It is the pattern of stressed and unstressed syllables that contributes to a sense of rhythm in speech. Stressed syllables are more prominent than unstressed ones.

English is known as a stress-timed language since the timing between stressed syllables is roughly equivalent, irrespective of how many unstressed syllables occur between these. French, on the other hand, is a syllable-timed language since roughly equal time is allocated to each syllable. In English, it is not possible to pronounce polysyllabic words correctly without having predicted the place of the stress. Thus, English is a free stress language. It follows that the stress can fall on the first syllable, the second, the third, the fourth or the fifth. French, on the contrary, is a fixed stressed language in which the stress always falls on the last syllable.

Although English is a free stress language, it is possible to predict stress placement according to the information indicated in Roach (2009:76). Indeed, Roach distinguishes four pieces of information necessary to decide on stress placement, namely:

a. The number of syllables in the word

b. The phonological structure of syllables

c. The morphological structure of the word (whether a simple or complex word)

d. The grammatical category (noun, verb, adjective, etc.)

It is recognized by many writers that stress is a highly complex matter in English. According to Roach (2009), some people hold the position that stress is not predictable by rule and must be

learned individually for each word. Other people hold the position that although the task seems tedious, one must try to find a way of writing rules that express what native speakers naturally tend to do in placing stress, while acknowledging that there will always be a substantial residue of cases which appear to follow no regular rules. We think that it is more rewarding to identify some regularities or general rules that govern thousands of words than to concentrate on learning the stress for individual words. Very simple rules can therefore help learners of English make progress in stress placement.

Yet, it is worth pointing out that there are many cases of English words with alternative possible stress patterns in British English and American English. These differences in stress patterns between the two main varieties of English are likely to lead learners into confusion. For example, the words *controversy, adult, laboratory, necessarily , research* may be stressed differently in British English and in American English respectively as [ˈkɒntrəvɜːsɪ] or [kənˈtrɒvəsɪ], [ˈædʌlt] or [əˈdʌlt], [ləˈbɒrətrɪ] or [ˈlæbrətɔːri], [ˈnesəsərəlɪ]or[nesəˈserəlɪ], [riˈsɜːtʃ] or [ˈrisɜːtʃ]. These changes of stress in the two varieties of English can be perceived especially in French loanwords like *adult, baton, beret, bidet, blasé, brochure, café, chalet, chauffeur, cliché, debris, debut, décor, detail, flambé, frappé, garage, parquet, paté, sachet, salon, vaccine*, etc. These words have the stress on the first syllable in British English, while in American English the stress falls on the second syllable. The words *attaché, consommé, décolleté, fiancé(e)* have the stress on the second syllable in British English while in American English the stress falls on the last syllable. The words *address, cigarette*, and *magazine* have the stress on the first syllable in American English while in British English the stress falls on the last syllable. Other changes of stress in the two varieties of English include words ending in *–ate*, especially verbs. These verbs have the stress on the first syllable in American English and on the second syllable in British English. For example: *dictate, donate, locate, migrate, placate, pulsate, rotate.* Both accents agree in exceptions like *abate, checkmate, duplicate, evacuate, graduate, imitate.*

There are also a few differences in the pronunciation of words ending in the suffixes *–ary, -ory,-berry*, and *–mony* in the two accents. Although the stress does not shift its place, the suffix *–ary* is pronounced as [eri] in American English whereas in British English it is pronounced [əri]. For example: *contrary, corollary, honorary, imaginary, and sedentary*. In some cases, in British English, the sound schwa (ə) is even elided, as in *military* [ˈmɪlɪtri] or *momentary* [ˈməʊməntri].

In words containing the suffix-*ory*, if the preceding suffix is unstressed ,British English still keeps the pronunciation [əri], while American English prefers [ɔːri], as in *accusatory, amatory, derogatory, laudatory, mandatory, migratory, auditory, premonitory, , recriminatory, repudiatory.*

When the preceding syllable is stressed, in most cases British English drops the schwa and American English keeps the sound [ɔː] as in the word *conservatory*, pronounced [kənˈsɜːvtri] in British English

and [kən'sɜːrvtɔːri] in American English. Other examples are *inventory, laboratory, lavatory, inflammatory, obligatory, oratory, predatory, repository, signatory, suppository, territory, transitory. Some exceptions to this rule are advisory, contradictory, compulsory, cursor, illusory, peremptory, rectory, satisfactory,* where both accents pronounce [əri].

The suffix-*berry* is pronounced as [beri] in American English while British English tends to either substitute [e] by schwa, yielding[əri], or even elide the first vowel, yielding simply[bri], especially in informal or quick speech. For example, *strawberry, gooseberry, raspberry.*

The suffix-*mony* : after a stressed syllable, this suffix is pronounced [mouni] in American English and [məni] in British English.

In any case, the above changes in stress in both accents are not so marked and do not compromise mutual intelligibility between speakers of the two varieties of English.

In spite of the complexity and apparent instability of stress placement in English, it should nevertheless be recognised that there exist some regularities that can be stated as rules and that can help learners improve their pronunciation. Stress placement in English is therefore *teachable* and *learnable,* to borrow an expression used by McCrocklin (2012). Indeed, a number of authors support that stress is teachable (Liu, 2007; Murphy, 2004; Sardegna, 2009; Tanner & Landon, 2009).It is in this vein that Dauer (2005) points out that '' 85% of the polysyllabic words in English can be accounted for by a limited number of rules''. By way of illustration, a   brief overview of some basic rules governing stress placement in polysyllabic English words is provided below, following the information obtained in Roach (2009).

1. With regard to simple disyllabic words, that is, words containing no affix,

-nouns bear the stress on the first syllable if it is strong. For example, *speaker ['spiːkə], object['ɔbjekt].*
-Verbs bear the stress on the final syllable if the final syllable is strong. For example: *arrange[ə'reindʒ] admit[ə'dmit]*. If the final syllable is weak, the stress falls on the first syllable. For example: *open['əupən], answer['aːnsə].*
-Adjectives bear the stress on the final syllable if the final syllable is strong. For example: *discrete[dɪs'kriːːt], correct[kə'rekt]*. If the final syllable is weak, the stress falls on the first syllable. For example: l*ovely['lʌvlɪ], fatal['feitl].*

2. For simple trisyllabic words: -Nouns bear the stress on the first syllable if it is strong. For example: *chocolate['tʃɔklət], paragraph['pærəgraːf]*. If the first syllable is weak, the stress falls on the second syllable. For example: *confusion[kən'fjuːʒn], potato[.pə'teitəu]*

-Verbs bear the stress on the penultimate syllable (the syllable before the last syllable) if the final syllable is weak. For example: *remember[ri'məmbə][, acknowledge[ək'nɔɒlɪdʒ]*. If the final stress is weak, the stress falls on the first syllable. For example: *monitor['mɔnitə], motivate['məutiveit]*.

-Adjectives bear the stress on the first syllable if it is strong. For example: *insolent ['insələnt], positive['pɒzɪtɪv]*.

3. With reference to compound words: -Compound nouns bear the primary stress on the first element, and the secondary stress on the second element. For example: *'swimming ,pool, 'wrist ,watch*. If the first element is an ingredient of the second element, the primary stress falls on the second element, while the secondary stress falls on the first element. For example:, *chicken' bouillon, ,milk'shake*. Except for compounds ending in cake, juice or water, for which the primary stress falls on the first element, the secondary stress falls on the second element. For example: *'chocolate ,cake, 'lemon ,juice, 'rose,water*.

-Compound adjectives have the primary stress on the second element, while the secondary stress falls on the first element. For example: , *blue-'eyed, ,open-'minded*. If the first element is a noun, the primary stress falls on the first element, the secondary stress on the second element. For example:' *home,sick, 'hand,made*.

- Compound verbs bear the primary stress on the second element, while the secondary stress falls on the first element. For example: , *over'boil, ,under'estimate*.

It is worth pointing out that most of the rules presented by Roach show that the stress tends to fall on syllables containing a long vowel or a diphthong and/or ending in more than one consonant.

To these rules can be added the approach adopted by Adamczewski and Keen (1973), who , citing Guierre(1966), have classified stress rules in two types , namely static rules and dynamic rules according to suffixes which can be self-stressed suffixes, neutral suffixes , and influencing suffixes.

4.For static rules, the first rule states that the stress falls on the final syllable containing suffixes like –**ee, eer, -ese,-oo,-oon,-ette,-esque, ade**, .For example: *absentee, agree, engineer, career, volunteer, Chinese, Japanese, Congolese, bamboo, kangaroo, taboo, tattoo, baboon, balloon, monsoon, cigarette, etiquette, usherette, arabesque, romanesque, picturesque, ambuscade, brigade, lemonade, aubade, ballade, glissade*. Exceptions include words like *coffee, committee, pedigree, spondee, trochee, overseer, cuckoo, baboo, igloo, omelette, palette, accolade, centigrade, decade, retrograde, orangeade, comrade, and marmalade* for which the stress falls on the first syllable.

The second static rule states that the stress falls on the penultimate syllable for words containing the suffixes –**ics, -ic, -ically,-ion, -ional, -ionally,- ionary, -ionable, -ionalist, -ian, -ial, -ual,-**

id,- it, -ish, -itis,-osis,-escence, and – i**scence** and their derivatives. For example: *phonetics, phonetic, economics,economic, scientific, scientifically, attention, additional, traditionally, dictionary, questionable, traditionalist, grammarian, celestial, individual, intrepid, implicit, accomplish, appendicitis, diagnosis, adolescence, reminiscence*. Exceptions include the following words: *catholic, Arabic, choleric, chivalric, lunatic, heretic, politics, rhetoric, arithmetic, cadaveric, dandelion, television, metamorphosis* for which the stress falls on the first syllable.

The third and last static rule states that the stress falls on the antepenultimate syllable (the syllable coming before the syllable that comes before the final syllable) for words containing the suffixes-**ity, -itive,-utive, -itant, -itude,-logy,-logist,-logism,-logize, -graphy,-grapher**, and –**ous**. For example: *ability, competitive, constitutive, concomitant, attitude, analogy, pharmacologist, neologism, apologize, geography, photographer, autonomous.* Exceptions include words like *disastrous, momentous, stupendous, enormous, portentous, desirous,* and *tremendous*. For these words, the stress falls on the second syllable.

5. Dynamic rules consist of shifts in stress placement from words to their derivatives. These shifts may be due to strong suffixes like: - **ian, -al,-ity, -ation,-ial, -ic, -ous, -uous,- ious,-eous**; For example: *grammar-grammarian, abdomen-abdominal, artificial-artificiality, abbreviate-abbreviation,*

'benefice-bene'ficial, a'cademy-aca'demic, 'miracle-mi'raculous, 'incest-in'cestuous,' industry-in'dustrious, ad'vantage-advan'tageous

The shifts may also be due to neutral disyllabic words (words which can be nouns/adjectives and verbs). In this case, the stress shifts from the first syllable (adjective or noun) to the second (verb). For example: '*absent-ab'sent, 'contract-con'tract, 'export-ex'port, 'import-im'port, 'rebel-re'bel, 'progress-pro'gress, 'protest-pro'test*, etc.

Yet, there are still other disyllabic words which keep the stress on the same syllable whether used as nouns/adjectives or verbs. For example: *ad'vance*(noun and verb), *a'lert*(adjective and verb), *'anger*(noun and verb), *a'ward* (noun and verb), *bal'loon* (noun and verb), *'capture* (noun and verb), *comp'lete* (adjective and verb), *'damage* (noun and verb), *de'bate* (noun and verb), *dis'grace* (noun and verb),' *honour* (noun and verb), *'empty* (adjective and verb), *mis'take* (noun and verb), *'order* (noun and verb).

In some words of the same family, the stress remains constant or moves to the right but entails a shift from the diphthong /ai / to the vowel / I/.For example: *'Bible-'biblical, 'wide-'width, 'sign-'signature, 'type-'typical, 'child-'children, 'Christ-'Christian,' life-'live, 'write-'written, 'five-'fifth, 'crime-'criminal, 'wise-'wisdom, 'wild-'wilderness, re'sign-resig'nation, ob'lige-obli'gation, 'fertile-fer'tility,* etc.

In some other words of the same family, the stress remains constant but it entails a shift from the diphthong / ei /to the vowel / æ/. For example: *'nation-'national, 'nature-'natural, 'shade-'shadow, 'Spain-'Spanish, 'table-'tablet*, etc.

Some compound words with meaningful prefixes have a double stress. For example: *'anti-'climax, 'arch'bishop, 'dis'loyal, 'ex-'president,' joint-'tenant, 'pre'paid,' inex'perienced, 'over'estimate, 'under-'secretary, 'vice-'chancellor, 'rear'range, 'sub 'dean,* etc. Exceptions to this rule include words like: *dis'courage, under'line, in'variably, unac'countably, un'usual, un'fortunate, im'possible* which have one stress.

Some compound words with adverbial function have a double stress. For example: *,down'hill, ,down'stairs, ,hence'forth, ,up'hill, ,up'stairs, ,whereu'pon, ,hence'forward, ,out'doors*, etc.

The majority of compound words have only one primary stress. This is the case for: *'apple-tree, 'bookbinding, 'bystander, 'fire-place, 'foot passenger, 'lightning-conductor, 'schoolmaster, 'secondary-school teacher, 'eyewitness, 'radio-technician, 'pencil-sharpener, 'record-breaker, 'weather-beaten, 'smoking-compartment*, etc.

In general, long words have a secondary stress in addition to the primary stress. For example: -secondary stress on the first syllable:, *centrali'zation, ,modifi'cation, ,represen'tation, ,uni'versity, ,individu'ality,, artifici'ality, ,naturali'zation, ,psycho'logical,,tempera'mental, ,hetero'geneous, ,aristo'cratic, ,characte'ristic*, etc.

-secondary stress on the second syllable, for example: *ad,minis'tration,af,fili'ation, an,tici'pation,con,side'ration,e,xami'nation, pro,nunci'ation, a,cade'mician, tu,bercu'losis, su,peri'ority, po,tenti'ality, fa,mili'arity, ac,cessi'bility, pe,culi'arity, en,cyclo'pedia*.

Admittedly, this quick overview on some basic rules of stress placement in English, which are not exhaustive, reveals that they are complex for mental storage.

Nevertheless, learners who have acquired a basic understanding of the main differences on stress placement in British and American English and who have acquired the above basic rules of stress placement in English will be equipped with a valuable tool that will enhance their listening comprehension and allow them to achieve greater clarity of pronunciation.

3. Methodological considerations

The data for the analysis of stress placement have been collected through observation, eavesdropping and a pronunciation test of a sample of ten polysyllabic words. Thirty three beginner students from the first year undergraduate in the English Department of the University of Lubumbashi participated in the pronunciation test during the academic year 2022-2023. The test

was administered to them as a routine practical exercise in English phonetics and phonology. The participants were asked to pronounce a sample of ten polysyllabic words and to mark the right place of the primary stress with the stress mark ('). The test was administered before the learners were introduced to the rules on word stress placement in English in order to assess their prior knowledge, identify the sources of errors in stress placement and suggest remedial strategies likely to help them improve their pronunciation. The test was followed by an interview with the participants in order to collect some information on the sources of their misplacement of the stress on polysyllabic words. The investigation was backed by both contrastive analysis, through similarities and mostly differences in the stress pattern structures in English and French for the purpose of drawing pedagogical implications for the teaching and learning of stress placement respectively by teachers and learners, and error analysis through the identification, classification, explanation, and evaluation of the errors.

The same test has been replicated after the learners have acquired a basic theoretical knowledge of stress placement rules.

4. **Findings and Discussion**

The table below presents the findings of the test on stress placement.

Numbers coming after the phonetic transcription indicate the number of the students who placed the stress on the indicated syllables.

Selected words	Correct stress placement	Incorrect stress placement	Incorrect stress placement	Incorrect stress placement
1.interesting	['ɪntrestɪŋ]: 9	[ɪn'terestɪŋ]: 17	[ɪnte'restɪŋ]: 6	[ɪntere'stɪŋ]:2
2.committee	[kə'mɪti] : 16	[kəmɪ'ti]: 12	['kəmɪti]: 2	
3. catholic	['kæƟəlɪk]: 2	[kæ'Ɵəlɪk]:20	[kæƟə'lɪk]: 8	
4.politics	['pɒlɪtɪks]:3	[pɒlɪ'tɪks]: 7	[pɒ'lɪtɪks]:18	
5.economics	[ekə'nɒmɪks]:8	['ekənɒmɪks]: 4	[e'kənɒmɪks]:14	[ekənɒ'mɪks]:4
6.Arabic	['ærəbɪk]: 4	[æ'rebɪk]:19	[ære'bɪk]:7	
7.photographer	[fɔ'təgræfə]: 21	[fɔtə'græfə]:6	[fɔtəgræ'fə]: 4	
8.ambassador	[æm'bæsedə]:20	['æmbæsedə]: 4	[æmbæ'sedə]:5	[æmbæse'də]:2
9.democracy	[dɪ'məkræsi]: 20	['dɪməkræsi]: 3	[dɪmə'kræsi]:5	[dɪməkræ'si]:1
10.arithmetic	[ə'rɪƟmetɪk]:7	['ərɪƟmetɪk]:2	[ərɪƟ'metɪk]:20	[ərɪƟme'tɪk]: 2

It is worth mentioning that some students who participated in the test failed to put the stress on some words and preferred to leave the words unstressed. This is the reason why the number of students who actually indicated the stress does not always match the total number of participants in the test.

In addition, contrastingly enough, the interview conducted with the participants after the test has revealed that some learners could pronounce the words accurately but put the stress mark at the wrong place, while other learners could assign the stress on a wrong syllable but pronounce the words accurately.

 Let us now scrutinize the errors made by the participants in stress placement.

As can be seen from the table above:

- If we consider the word *interesting* (n°1), we notice that only 9 students out of thirty one managed to put the stress at the right place. All the other students misplaced the stress. The most plausible source of the misplacement of the stress may undoubtedly be interlingual interference from French by analogy to the pronunciation of the French word *intéressant* that they already know. They may have counted the number of syllables in the word i*nteresting* from its spelling rather than taking into account its phonetic transcription in which it has three syllables, thus confusing the three syllables in English and the four syllables in the French word i*ntéressant*.   The misplacement of the stress may also find its source in the learners 'own intuitive strategies in predicting the stress on the wrong syllable.

-For the word *committee* (n°2), 16 students managed to put the stress at the right place. 12 students placed the stress on the final syllable by analogy to the pronunciation of the equivalent French word *comité*. This misplacement of the stress therefore finds its source in interlingual interference from French. The 2 other students placed the stress on the first syllable through their own strategies of prediction through intuition.

-With regard to the word *catholic* (n°3), only 2 students succeeded in assigning the stress on the right syllable. 20 students placed the stress on the second syllable by overgeneralization of the rule about words ending in the suffix –ic. This means that they know the general rule governing words ending in the suffix –ic, but they are not informed that the word *catholic* is an exception to the rule along with other words and that the stress should fall on the first syllable. This error in stress placement can therefore be traced back to intralingual interference within English. As to the other 8 students, they placed the stress on the third syllable. This error can find its source in interlingual interference

from French by analogy to the pronunciation of the word *catholique* in French. They have transferred the stress pattern of French into English.

-As for the word *politics* (n°4), only 3 students managed to put the stress at the right place. 18 students placed the stress on the second syllable by overgeneralization of the rule for words ending in the suffix –ics. They know the general rule but they ignore that the word *politics* is an exception to this rule. This error is a result of intralingual interference within English. The other 7 students placed the stress on the third syllable by analogy to the pronunciation of the French word *politique* . Such an error is the result of interlingual interference from the French syllable pattern.

-Considering the word *economics* (n°5), 8 students succeeded in placing the stress on the right syllable. 4 students placed the stress on the first syllable, 14 placed the stress on the second syllable, while 4 students placed the stress on the fourth syllable. The placement of the stress on the first and second syllables may find its source in learners' intuitive strategies resulting in a wrong appreciation of the right place, while placing the stress on the final syllable may be considered as interlingual interference from the French syllable pattern by analogy to the pronunciation of the French word *économie*.

-If we look at the word *Arabic* (n°6), we notice that only 4 students managed to place the stress on the right syllable. 19 students placed the stress on the second syllable, while 7 students placed the stress on the third syllable. Assigning the stress on the second syllable can be accounted for as intralingual interference through the overgeneralization of the rule for words ending in the suffix –ic, while the word *Arabic* is an exception to the rule. On the other hand, placing the stress on the second syllable may be considered as interlingual interference from French by analogy to the pronunciation of the word *Arabe* in French. Still, placing the stress on the third syllable may also be considered as the result of intralingual interference due to a wrong application of the rule governing words ending in the suffix–ic.

-If we consider the case of the word *photographer* (n°7), we notice that 21 students managed to put the stress at the right place, while 6 students placed the stress on the third syllable and 4 students placed the stress on the last syllable. The 21 students have some theoretical knowledge on stress placement for this word, while the other ten students have misplaced the stress through interlingual interference from French or through their own intuitive strategies.

-As for the word *ambassador* (n°8), 20 students have assigned the stress on the right syllable, while the 12 other students have placed the stress on the first, third, and fourth syllables. The 20 students have some theoretical knowledge on the stress placement for this word, while the other 11 students have misplaced the stress through their own intuitive strategies and through interlingual interference from French by analogy to the pronunciation of the French word *ambassadeur*.

-For the word *democracy* (n°9), 20 students have succeeded to assign the stress on the right syllable, while the other 9 students have misplaced the stress through interlingual interference from French by analogy to the pronunciation of the French word *démocracie* and through their own intuitive strategies.

-As regards the word *arithmetic* (n°10), only 7 students managed to place the stress correctly, that is, on the second syllable, while the other 24 students misplaced the stress. This misplacement of the stress may be accounted for by overgeneralization of the rule governing stress placement on words ending in the suffix-ic, therefore resulting in intralingual interference within English, through interlingual interference from French by analogy to the pronunciation of the French word *arithmétique* or through learners' intuitive strategies. The word *arithmetic* is an exception to the general rule for words ending in the suffix –ic and receives the stress on the second syllable.

All things considered, at the end of this investigation, a close scrutiny of the errors made in stress placement by the participants reveals that the majority of these errors can be traced back mainly to five sources, namely interlingual interference from French, intralingual interference within English, learners 'own intuitive strategies, context of learning with the teacher as the model, and ignorance of the rules that govern stress placement on English polysyllabic words along with exceptions to these rules.

Paradoxically, the replication of the same test to the same learners after they have acquired some theoretical knowledge in stress placement rules revealed that the great majority of learners assigned the stress on the appropriate syllables without any difficulties because they were empowered with this basic theoretical knowledge. The results of the replication of the test therefore confirm what McCrocklin (2012) stated, "despite the complexity of the word stress system, numerous teachers and researchers are successfully teaching word stress and finding that it is teachable and learnable".

Considering the occurrence of the stress placement errors under investigation, it is therefore advisable that some remedial strategies be implemented in the teaching and learning of stress placement in terms of pedagogical implications in order to help learners improve their pronunciation. Teachers are therefore invited to revisit their methodologies in the teaching of English pronunciation. Stress placement should not be taught in isolation. It should rather be integrated within other aspects of pronunciation like articulation of sounds, intonation, and rhythm, on one side and within vocabulary, and grammar on the other side.

Teachers should first of all master the rules of stress placement themselves in order to teach them with confidence and then empower learners with theoretical knowledge of the rules governing stress placement in English polysyllabic words. Bearing in mind that practice makes perfect, teachers

should facilitate the acquisition of stress rules to learners in a gradual process in designing practical exercises on stress placement and asking the learners to assign the stress on the correct syllable. The first thing teachers should start with is to empower learners in syllable identification and division relying on phonetic transcription rather than on spelling. Indeed, spelling can be misleading since some letters of the alphabet are visible but are not pronounced. For example, the word *interesting* can be thought of as having 4 syllables: in-te- res- ting, while in phonetic transcription ['ɪntrəstɪŋ], it has 3 syllables (in-trəst-ɪŋ). Syllable division can help learners identify the number of syllables or sound units that a word contains and thus assign the stress on the right syllable. Teachers should introduce learners to identify the stress mark through different notations. In most dictionaries, the primary stress is indicated by a small vertical stroke high up ('), while the secondary stress is indicated by the same vertical stroke down (,).Other notations indicating the stress mark are : underlining the stressed syllable, writing the stressed syllable in bold characters, circling the stressed syllable, and writing the stressed syllable in capital letters. Teachers should also warn learners against negative transfer of the French syllable pattern into English that can mislead them in placing the stress at the wrong place.

Teachers should teach stress placement in an orderly way, starting with monosyllabic words which have the stress on the one syllable. Every word should be learned with the correct stress. Afterwards, they should consider disyllabic words, which can bear the stress on the first or second syllable, whether they are nouns, verbs, or adjectives. They should also focus learners' attention on disyllabic words which keep the stress on the same syllable whether they are nouns, adjectives, or verbs. Next, they should proceed to stress placement on trisyllabic words for which the stress can fall on the first, second or third syllables depending on the grammatical categories as prescribed by the rules. They can also teach the rules applying for compound words depending on their grammatical categories. Then, teachers should accompany learners in the acquisition of the rules for words containing four syllables for which the stress falls on the second or third syllables. Finally, they should facilitate the acquisition of rules for words containing five or six syllables.

All these rules should be taught along with the exceptions where exceptions exist. The rules must also be very simple for learners to master and be accompanied by practical exercises. Teachers should also draw the attention of learners on words of the same family for which the stress shifts from one syllable to the other. For example: PHOtograph-phoTOgrapher-photoGRAphical; aCAdemy-acaDEmic-acadeMIcian. In addition, teachers should draw learners' attention on pairs of disyllabic words with identical spelling which differ from each other in stress placement according to word class (nouns, verbs or adjectives) like OBject and obJECT, REbel and reBEL, IMport and imPORT, DEsert and deSERT, etc .

The theoretical knowledge of these basic rules will help learners to understand how the stress system functions in English so that they can accurately predict the place of the stress in a great number of polysyllabic words in English and thus avoid making many errors in stress placement. Through these basic rules, learners will therefore be empowered with predictive skills and become self-made men in stress placement. As Dickerson (1994:29) asserts, ''Learners no longer have to wait for the teacher to teach them, nor do they have to confine their learning to the classroom, because prediction skills empower learners to teach themselves at any time in any location. They have the tools with which to become self-instructors''. Teachers therefore merely have only the responsibility of facilitating learners' acquisition of stress and of playing the role of coaches in pronunciation. They should train learners to become independent and autonomous learners in word stress placement. Learners self-regulated efforts should thus be empowered with stress placement strategies through teachers' scaffolding (Sardegna, 2013).

Teachers can also find some resources for the teaching of stress placement from the Internet and from YouTube Channel in which native speakers provide hints for teaching stress placement and from which learners can watch videos and listen to authentic stress placement exercises. Learners can be encouraged to download many videos with lessons on stress placement from You Tube Channel and continue their self-instruction. Today, advances in new technology like language laboratories also provide learners with opportunities to learn stress placement more effectively than in the past.

After learners have practised stress placement with words used in isolation, they can be given the opportunity to practise in connected speech through reading aloud sentences containing words for which the theoretical knowledge of stress rules has to be implemented. Here are some examples of such sentences, (most of which were taken from Adamczewski and Keen (1973)):

1Absentees will have to produce a medical certificate. 2. The photographer took interesting photographs of the landscape. 3. How many students are absent today? 4. He absented himself from the meeting. 5 Russian and Chinese representatives have again met in Moscow. 6. Is he a democrat or a Republican? 7. The Ambassador was called to the Foreign Office and handed a strong note of protest. 8. The rebel forces are reported about ten miles from the capital. 9. How I dislike the bureaucratic attitude of Embassy employees. 10. Westminster Cathedral is Roman Catholic. 11. Politics is my brother's main interest. 12. His main interests are phonetics and linguistics. 13. The new Ambassador speaks fluent Arabic. 13. Is he an Aristotelian philosopher? 14. The team of mountaineers was rescued by helicopter. 15. As we have said before, French Academicians are immortal. 16. It is difficult to reconcile his professional integrity and his ignominious negligence of his children. 17. The laboratory is equipped with German electronic microscopes. 18. Several

eyewitnesses bore testimony to the accused doctor's integrity. 19. I always enjoy a cup of coffee on a café terrace. 20. The nationalisation of the steel industry is a major political issue.

5. Conclusion

The present study set out to investigate the potential sources of a sample of stress placement errors made by Congolese French speakers learning English from the English Department of the University of Lubumbashi in the Democratic Republic of Congo.

A close scrutiny of the errors under investigation has disclosed that they can be traced back to five major sources. The first source is interlingual interference from French by analogy to the pronunciation of the French words i*ntéressant, comité, catholique,politique, économie, photographe, ambassadeur, démocracie*, and *arithmétique* which are respectively similar in spelling to the English equivalents i*nteresting, committee, catholic, politics, economics, photographer, ambassador, democracy*, and *arithmetics*. These words were stressed on the last syllable like in French, in which the stress is always assigned on the last syllable, through ignorance of the rules governing stress placement in English along with their exceptions. The participants have thus transferred negatively the stress pattern of French into English.

The second source is intralingual interference within English through the generalization of the rule for words ending in the suffixes –ic and –ics, namely *catholic, economics, Arabic*, and *arithmetics.* The occurrence of such errors can be accounted for by the overgeneralization of the rule applicable to words ending in the suffixes –ic and- ics for which these words are exceptions.

The third source of errors is the learners' self- reliance on their intuition or sixth sense that made them feel that their prediction for stress placement was accurate. This intuition misled them both in the cases of interlingual interference and   intralingual interference.

The fourth likely source of errors is undoubtedly the lack of a theoretical knowledge of the rules governing stress placement in English which induced them to rely on their intuitive strategies. If learners were empowered with this theoretical knowledge, they would be prepared to predict the stress at the accurate place and avoid such errors caused by interlingual and intralingual interference.

The fifth plausible source of errors might be the context of learning through the teacher considered as the model of pronunciation by learners (teacher-induced errors). We assume that some errors result from learners' previous training with their former teachers as the models.

The findings of the present study provide us with some insights with regard to   pedagogical implications. To begin with, teaching and learning methodologies ought to be revisited in the teaching of English. Pronunciation, which is crucial for clear mutual and global communication, but which is often pushed to the bottom, should be taught along with other aspects of language like grammar, vocabulary, speaking, reading and writing.

Teachers who feel reluctant to teach pronunciation are invited to be empowered with the theoretical knowledge on stress placement in order to teach it with confidence. Stress placement should be integrated within the teaching of vocabulary, conversation, and grammar.

Learners should be empowered with predictive skills on the placement of stress in polysyllabic words through teachers' scaffolding and encouraged to continue their self-instruction independently.

Overall, remedial strategies for the improvement of stress placement   include empowering both teachers and learners with theoretical knowledge on the basic rules governing stress placement, practical exercises on syllable identification and division, discriminating stressed from unstressed syllables, repetition of the teacher's model in chorus or individually, stress placement exercises on polysyllabic words , downloading videos with lessons on authentic stress practice by native speakers on You Tube Channel, scaffolding learners 'efforts through reading aloud sentences containing polysyllabic words in connected speech, and encouraging learners 'self-continued instruction in language laboratories and from video and audio lessons from the Internet through You Tube Channel.

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