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Erroneous Word-Stress Patterns Used by EFL Yemeni Learners

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Abstract: This experimental study aims at investigating the English word-stress patterns used by Yemenis, learning English as a foreign language, and the erroneous stress patterns used by them. Accent or stress is a feature of high significance in English speech. At the level of a word, one syllable gets accentuated with primary stress. To achieve the purpose of this study, and to find out to what extent word stress of Received Pronunciation English poses difficulty on Yemeni Arabic speakers using English as a foreign language, 120 subjects of various scientific disciplines, were chosen for data collection. They were recorded and their utterances went through deep analysis based on the auditory impression of the researcher and on the spectrographic evidence resulting from the speech analysis of the software program PRAAT. The most significant findings reached by the researcher were that word-stress in the four-syllable target words were the most problematic for the speakers in which 53.2% of them put the stress, randomly, on the wrong syllables in words. Three-syllable target words appeared to be less problematic as 44.4% of the participants placed the stress inaccurately in words. The least difficulties encountered by the speakers were with the two-syllable target words where 70.6% of the speakers managed to pronounce the words with correct stress placement. It is noteworthy to mention that there was a tendency among the speakers who produced wrong stress patterns, to accent either the first syllable or the one including a long vowel or a diphthong in the words.

Keywords: Word Stress, RP, EFL Yemeni learners, Error analysis

About the Authors



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Introduction

Language is a complex skill and an essential part of human social development. EFL Yemenis, like many EFL and ESL learners, aspire to achieve a language competency that enables them to master the four skills of English, mainly the speaking one. Reed & Levis (2019) states that 'even though, a native-like accent is impossible for most adult learners, pronunciation remains the gateway to spoken intelligibility for learners because of its close ties to social meanings within language'. For more effective language communication, segmental and suprasegmental



features are involved. In linguistics of English, stress or accent is a suprasegmental feature which is defined as, relative emphasis or prominence given to a certain syllable in a word, or to a certain word in a phrase or sentence. This emphasis is typically caused by such properties as increased loudness (its physical counterpart is intensity measured by dB), vowel length (duration), full articulation of the vowel, and changes in pitch (its physical counterpart is frequency measured by Hz) (Fry, 1964). Factors such as pitch, loudness, quality, and quantity contribute to make a syllable more prominent than its neighbours. As Gimson (2014) puts it "a stressed syllable in occurrence is produced by pushing more air out of the lungs, initiating greater respiratory energy and an increase in laryngeal activity relative to the unstressed ones". Stress, in most poly-syllable English words, is unpredictable and follows fixed rules. To put it more clearly, the accentual pattern of English words is fixed, in the sense that the primary accent always falls on a particular syllable of any given word, but free, in the sense that the primary accent is not tied to any particular point in the chain of syllables constituting a word (Gimson, 2014).

Two levels of stress contribute to the accentual pattern of English words; primary stress and secondary stress. The position of the former is the principal cue to the nuclear tone, while the latter is stressed only due to the vowel quality which distinguishes it from the unstressed syllables in words, but it cannot be as strong as a syllable with primary stress.

IPA uses the symbols ('), and (.) which are placed before the stressed syllables; the high with primary stress and the low with secondary stress. The two terms, *word accent* and *word stress* are used interchangeably in this paper.

As a background, Yemen is an Arabian country located at the southern end of the Arabian Peninsula. Standard Arabic is the official language in Yemen and the informal Yemeni Arabic is the variety used by Yemenis. English (RP), is the foreign language that is taught at schools and educational institutions as a course that all students should pass. It is only used by a minority of educated people in a very narrow range. However, day by day, Yemenis become more aware of the importance of English as a global communication language in all fields.

Considering that the current study seeks to spot the erroneous word accent patterns produced by EFL Yemeni learners, the Error Analysis approach will be adopted.

Error Analysis (ER) is a branch not of linguistic theory or pure linguistics but of applied linguistics that is concerned with tracing errors made by language learners, of which pronunciation errors (James, 2013). EA is reserved for the study of erroneous utterances produced by groups of learners (James, 2013:207). It was preferred to conduct the current study which does not take contrastive analysis into consideration. In CA, features of Target Language and Native Language are described and compared. The novelty of EA, distinguishing it from CA, is that in the former, the mother tongue was not supposed to enter the picture predictably. The claim was made that those errors could be fully described in terms of the TL, without the need to refer to the L1 of learners (James, 2013). As Cook (1993) puts it: 'Error Analysis was [and still is] a methodology for dealing with data, rather than a theory of acquisition'.

The suprasegmental feature of word accent in English is one of the topics researchers have been dealing with. De Jone & Zawaydeh (1999) sees that EFL Arabic Jordanian subjects exhibit extensive final lengthening effects and a smaller effect of stress on penultimate lengthening. According to him, stress lengthening correlates with higher first formants, while penultimate lengthening does not. Ali (2000) indicates that EFL Yemeni speakers had difficulties with English long vowels and diphthongs, some consonants, three-element clusters occurring words finally, stress placement and intonation. According to Quinn (2010), studying speech errors may provide the non-Arabic speaking teachers an idea of L1 attributed errors committed by EFL Arabic speakers and some strategies to decrease those errors after understanding their nature.

Methodology

Subjects

To study the word-stress patterns used by EFL Yemeni learners, 120, 60 males and 60 females, were taken as subjects. They are aged between 20 and 35. All of them live in Yemen and are undergraduates or postgraduates of various disciplines. Yemeni Arabic is the mother tongue of all and none is bilingual. English was a course taught



to them at the level of school and university for at least seven years and used in a very narrow range by them. It can be stated that these subjects are homogeneous to a large extent. They were requested to read the list of the corpus as naturally as possible. Totally wrong utterances produced by the subjects have been excluded.

Assessment Material

The current study adopted The Labovian model which was developed by William Labov in 1966 and extended by Lorna Dickerson in 1974. According to AL-Shuaibi (2006), this model 'emphasizes the significant influence of inner psychological (mental) processes upon individual speakers' patterns of stylistic variation'. This model 'aims at describing accurately the systematically variable patterns of a speaker's speech production in a multiplicity of situations' (AL-Shuaibi, 2006).

For the process of data collection, Labov presents four different tasks, passage reading, word list reading, casual speech, and minimal pairs reading.

This study utilizes the word list reading task to figure out the difficulties and errors EFL Yemeni speakers encounter with word stress in RP.

As a reading task, a list of 50 words belonging to different accentual patterns in English was selected. The 50 words include two-syllable, three-syllable, and four-syllable words. Simple and common words as well as words with different affixes, and with different grammatical functions were taken as targets.

The 50 target words along with their syllable divisions are shown in table 1. below.

Table 1. Target words.

Two-syllable target words	Three-syllable target words	Four-syllable target words
'answer	'dangerous	bi'ography
be'tween	refu'gee	infor'mation
'billow	after'noon	me'morial
'knowledge	under'stand	psy'chology
'present (n)	di'vision	o'fficially
pre'sent (v)	disap'point	ac'tivity
my'self	enter'tain	im'possible
'subject (n)	engi'neer	po'litical
sub'ject (v)	'probable	cu'stodian
'something	a'stonish	unim'portant
suc'ceed	'advertise	scien'tific
re'write	'argument	
'leaving	con'tinue	
re'port	e'xample	
wi'thout	'satisfy	
re'sult	ciga'rette	
be'low	de'licious	
'football	re'member	
	fa'miliar	
	ad'vantage	
	'company	

Data Collection Procedure

The 120 participants were recorded while reading the list of words as naturally as they could, consequently, the recordings were the main source of the raw data for this study. Speakers were given time to go through the list



before reading aloud and launching the recording process. A mono-directional microphone, a laptop in which PRAAT (praat6024_win64) was used to record the target words to elicit the erroneous word stress patterns used by the participants.

Data Analysis

The recordings were coded to be analysed on the basis of the following:

1. The intuition and auditory observation of the researcher. Each word was listened to carefully many times and the syllable receiving the primary accent was marked.
2. The spectrograms (see appendices in supplementary data) that were obtained from PRAAT in order to provide instrumental evidence of stress placement in every single word. PRAAT is a software program developed by Paul Boersma and David Weenink of the University of Amsterdam. It is a very flexible tool to do speech analysis. It offers a wide range of standard and non-standard procedures, including spectrographic analysis, articulatory synthesis, and neural networks.

Discussion and Findings

The participants' recordings were carefully analysed to find out the accentual patterns of word stress used by them.

Accentual patterns in the two-syllable target words

Regarding the two-syllable words, it was found that 70.6% of the subjects managed to place the stress on the proper syllable. Interestingly, in the two words { 'billow} and {be 'low}, in which the first syllable is stressed in the former and the second syllable in the latter, most of the subjects did not distinguish them in pronunciation and tended to place the accent on the second syllable in the two words. Similarly, most of the speakers failed to distinguish the stress location in the different grammatical words, { 'present}, { 'subject} as nouns and {pre 'sent}, {sub 'jec} as verbs and tended to put the stress generally on the first syllable in all, which conveys a remarkable mispronouncing of verbs stress. In supporting this finding, in a similar study, [Hismanoglu \(2012\)](#) referred that his EFL Turkish subjects mispronounced the primary stress more excessively in verbs than in nouns. [Al-Khulaidi & Abdulkhalik \(2015\)](#) revealed a similar result since their 10 EFL Yemeni subjects had the nouns correctly accented but failed to bring out the distinction in the case of the verbs. However, in a study conducted on EFL Indonesian subjects by [Indrayani & Rizki \(2019\)](#), it was found out that stress word placement is dominated by verb stress instead of noun stress. It seems that mother tongue negative interference plays a crucial role in occurring such errors.

With incorrect syllabification of words such as {be 'tween} and {wi 'thout}, the part "ween", which is made of the second element of the coda cluster of the first syllable and the second syllable, and the part "out", which is made of the nucleus and coda of the second syllable while the onset was attached to the first one, received the stress by 8% and 35% of the speakers respectively.

[Table 2.](#) below illustrates the two-syllable word-stress patterns used by the speakers. The first pattern (in italic) in each cell of the table represents the correct stress pattern of a word. In Appendix I (supplementary data), the spectrograms exhibit the acoustic features in terms of intensity, duration, and range of frequencies in addition to the waveforms in the two-syllable target words as produced by the speakers.

Table 2. The two-syllable word-stress patterns used by the speakers

Accentual patterns in the two-syllable target words	No. of Speakers	Total Percentage
<i>'answer</i>	87	73%
an 'swer	33	28%
<i>be 'tween</i>	101	84%
'between	10	8%



bet 'ween	9	8%
'billow	52	46%
bi 'llow	62	54%
'knowledge	86	75%
know 'ledge	28	25%
'present (n)	66	55%
pre 'sent	54	45%
pre 'sent (v)	46	38%
'present	74	62%
my 'self	71	59%
'myself	49	41%
'subject (n)	88	73%
sub 'ject	32	27%
sub 'ject (v)	56	47%
'subject	63	53%
'something	97	81%
some 'thing	23	19%
suc 'ceed	81	76%
'succeed	25	24%
re 'write	93	78%
'rewrite	27	22%
'leaving	94	78%
lea 'ving	25	22%
re 'port	106	88%
'report	13	11%
wi 'thout	75	63%
'without	2	2%
with 'out	42	35%
re 'sult	94	80%
'result	23	20%
be 'low	81	73%
'below	30	27%
'football	96	81%
foot 'ball	22	19%

Accentual patterns in the three-syllable target words

With regard to the three-syllable target words, 55.6% of the speakers could pronounce them with the correct accent placement. However, 44.4% of the participants failed to place the accent on the appropriate syllables of the target words. In an attempt to order the words with the largest percentage of errors, from most problematic to least; {after 'noon} with 80% of erroneous occurrences was the first as most of the participants placed the stress on the first syllable [af-] instead of [-noon]. {'advertise} follows with 77% since most speakers tended to place the stress on the final syllable [-tise]. Then, {refu 'gee}, with 66% of wrong stress patterns in which [re-] received the stress. {a 'stonish} comes after with 63% and, because of wrong syllables division, a good number of subjects put the stress



on the first part of the word [as-] which is made of the nucleus of the first syllable and the onset of the second one. Both { 'satisfy} and {ciga 'rette} follow with the same percentage of errors; 61% and most of the participants tended to place the stress on the third syllable [-fy] and the first syllable [ci-] in the two words respectively. Before the last, {di 'vision} recorded the error percentage of 59% as many speakers intended to stress the first syllable [di-]. Finally, {'probable} had the least violation percentage among the target words with 56% and it is found that the second syllable [-ba-] received the stress by the largest part of the sample. Providing a similar result, Al-Khulaidi & Abdulkhalik (2015) mentioned that EFL Yemeni speakers had a tendency to accent the last syllable in words ending with [-fy] and [-ate]. This, according to him, is due to mother tongue influence in which the pattern is to accent any heavy syllable containing a long vowel or a diphthong.

Table 3. below shows the three-syllable word-stress patterns used by the speakers. The first pattern (in italic) in each cell of the table represents the correct pattern of a word. The spectrograms in Appendix II (supplementary data) provide a good deal of acoustic information of the accentual patterns produced by the subjects in the three-syllable target words.

Table 3. Three-syllable word-stress patterns used by the speakers

Accentual patterns in the three-syllable target words	No. of Speakers	Total Percentage
<i>'dangerous</i>	91	77%
dange 'rous	27	23%
<i>refu 'gee</i>	22	33%
'refugee	28	42%
ref 'ugee	16	24%
<i>after 'noon</i>	24	20%
'afternoon	64	53%
af 'ternoon	32	27%
<i>under 'stand</i>	77	64%
'understand	33	28%
un 'derstand	9	8%
<i>di 'vision</i>	47	41%
'division	44	38%
divi 'sion	25	22%
<i>disap 'point</i>	81	69%
'disappoint	23	20%
dis 'appoint	13	11%
<i>enter 'tain</i>	78	70%
'entertain	10	9%
en 'ertain	23	21%
<i>engi 'neer</i>	67	57%
'engineer	36	31%
en 'gineer	15	13%
<i>'probable</i>	38	44%
pro 'bable	46	53%
proba 'ble	3	3%
<i>a 'stonish</i>	44	37%
'astonish	30	25%
as 'tonish	22	19%



asto ' nish	22	19%
' advertise	27	24%
ad ' vertise	11	10%
adver ' tise	76	67%
' argument	74	69%
ar ' gument	19	18%
argu ' ment	14	13%
con ' tinue	82	70%
' continue	23	20%
contin ' ue	12	10%
e ' xample	111	95%
exam ' ble	6	5%
' satisfy	38	39%
sa ' tisfy	8	8 %
satis ' fy	52	53%
ciga ' rette	45	39%
' cigarette	44	39%
ci ' garette	25	22%
de ' licious	63	55%
' delicious	29	25%
deli ' cious	22	19%
re ' member	76	63%
' remember	12	10%
remem ' ber	31	26%
fa ' miliar	60	56%
' familiar	27	25%
famil ' iar	21	19%
ad ' vantage	76	63%
' advantage	15	13%
advan ' tage	29	24%
' company	100	83%
com ' pany	13	11%
compa ' ny	6	6%

Accentual patterns in the four-syllable target words

On the basis of the analysed data, it was concluded that word stress in the four-syllable target words is considered to be the most difficult and problematic for the participants since 53.2% tended to place the accent, improperly on syllables. 46.8% did not violate the correct stress patterns of RP. The most problematic, among the four-syllable target words, for the subjects was {scien ' tific} in which only 1% of the speakers managed to pronounce the word with correct placement of accent; nonetheless, 91% erroneously put the stress on the first syllable [sci-]. Following this word in the percentage of erroneous utterances, come, in order, {cu ' stodian} with 66%, {unim ' portant} with 65%, {ac ' tivity} with 64%, {psy ' chology} with 58%, and {po ' litical} with 52%.



More details are given in table 4. below. Appendix III (supplementary data) includes the spectrograms which provide the acoustic display of stress patterns of the speakers in the four-syllable target words.

Table 4. Four-syllable word-stress patterns used by the speakers

Accentual patterns in the four-syllable target words	No. of Speakers	Total Percentage
<i>bi 'ography</i>	55	51%
' biography	24	22%
biog ' raphy	22	21%
biogra ' phy	6	6%
<i>infor 'mation</i>	78	65%
' information	15	13%
in ' formation	16	14%
informa ' tion	11	9%
<i>me 'morial</i>	64	62%
' memorial	16	15%
memo ' rial	4	4%
memor ' ial	20	19%
<i>psy 'chology</i>	40	42%
p ' sychology	47	49%
psycholo ' gy	9	9%
<i>o 'fficially</i>	65	64%
' officially	17	17%
offi ' cially	5	5%
officia ' lly	15	15%
<i>ac 'tivity</i>	43	36%
' activity	61	51%
acti ' vity	5	4%
activi ' ty	10	8%
<i>im 'possible</i>	91	77%
' impossible	18	15%
impossi ' ble	9	8%
<i>po 'litical</i>	55	48%
' political	27	24%
poli ' tical	2	2%
politi ' cal	30	26%
<i>cu 'stodian</i>	34	34%
' custodian	39	39%
cus ' todian	10	10%
custod ' ian	15	15%
<i>unim 'portant</i>	39	35%
' unimportant	64	57%
un ' important	4	4%
unimpor ' tant	5	5%



<i>scien ' tific</i>	1	1%
' scientific	96	91%
scienti ' fic	9	8%

Conclusion

The current experimental study was carried out on 120 EFL Yemeni speakers to figure out the area of errors and difficulties regarding word accent in RP. It can be revealed that the more syllables are there in the word, the more errors are made by the speakers as four-syllable words had the highest percentage of erroneous stress placement with 53.2% disconformity with RP, followed by three-syllable words with 44.4%, and finally the two-syllable words which contained the least percentage of errors; 29.4%. Many participants cannot distinguish the grammatical function of word stress in words such as "present" and "subject". Generally, it seems that many speakers do not follow regular rules of stress with most words and place it mostly on the basis of wild guess. Most of those who failed to predict the correct placement of stress in polysyllabic words tended to adopt the strategy of accenting either the first syllable or the one including a long vowel or a diphthong.

In view of the findings of this study and similar studies, EFL Yemeni speakers are in dire need of proper training in English speaking in general and in English phonology in particular. A syllabus with efficient pronunciation content and well-trained teaching staff should be available in the educational system in Yemen. Supra-segmental features of English, including stress, should be taught side by side with the segmental features. Further research into the field of pronunciation errors committed by EFL Yemeni speakers, is urgently required and is thereby strongly recommended.

References

- Ali, N.A.M.S., (2000), A Contrastive study of Segmental and suprasegmental features of Arabic and English Spoken in Yemen, Unpublished Ph.D. Thesis, Central Institute of English and Foreign Languages, Hyderabad, India.
- Al-Khulaidi M.A., & Abdulkhalik, M.M., (2015), Word Accent in Yemeni English: A Phonetic Study. *International Multidisciplinary Journal*, 3(3) 14-26.
- AL-Shuaibi, A.M.A, (2006), Phonological Analysis of English Phonotactics of Syllable Initial and Final Consonant Clusters by Yemeni Speakers of English. Thesis. School of Humanities, Department of English Language Studies, University of Science Malaysia (USM), Penang State Malaysia.
- Cook, V.J., (1993), *Linguistics and Second Language Acquisition*, Macmillan, Basingstock.
- De Jone, K., & Zawaydeh, B.A., (1999), Stress, Duration, and Intonation in Arabic Word-Level Prosody, *Journal of Phonetics*, 27(1), 3-22. <https://doi.org/10.1006/jpho.1998.0088>
- Fry, D.B., (1964), The correction of Errors in the Reception of Speech, *Phonetica*, (11) 164-174. <https://doi.org/10.1159/000258337>
- Gimson, (2014), *Pronunciation of English*, Graphieraft Limited, Hong Kong.
- Hismanoglu, M., (2012). Teaching Word Stress to Turkish EFL (English as a Foreign Language) Learners Through Internet-Based Video Lessons, *US-China Education Review A1*, 26-40.
- Indrayani, L.M., & Rizki, V., (2019), The Production of Word Stress Patterns in English Noun to Verb Conversion Words by Adult EFL Learners in Indonesia: A Phonological Study. *International Journal of English, Literature and Social Sciences*, 4(6) 1940-1945.
- James, C., (1998), *Errors in Language Learning and Use: Exploring Error Analysis* (1st ed.). Routledge, London. <https://doi.org/10.4324/9781315842912>
- Reed, M., Levis J., (2019), *The Handbook of English Pronunciation*, Wiley Blackwell, USA.
- Quinn, CMD., (2010), Contrastive Analysis for Non-Arabic-Speaking Teachers: The basics that you need to know to help your students. *Univ. of Nizwa Faculty Seminar*, (14) 1-12.



Additional Information

The spectrograms that were obtained from PRAAT software are provided in the supplementary document

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Conflict of interest

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