A Study of Word Stress Variation in English among Undergraduate non-English Teachers

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Abstract

This paper aims to study word stress variation in English among undergraduate teachers. Word stress is one of the supra segmental features of English language. To make hearer to understand spoken English and to maintain intelligibility, the word stress plays a key role. To maintain intelligibility in spoken English among teachers and students, speakers' word stress is vital. The present study explores undergraduate non-English teachers' word stress patters and their deviations in word-stress. This study presents undergraduate teachers' word stress patterns and word stress deviations from the Received Pronunciation. Twenty undergraduate teachers' spoken data were analyzed based on researches auditory impression. The findings and recommendations are presented at the end.

Keywords: English among Undergraduate non-English Teachers, word stress, intelligibility, received pronunciation, supra-segmental, syllable.

1. Introduction

Word stress is one of the important supra-segmental features of English. It is completely the property of a syllable, a larger unit over a segment. A stressed syllable is usually produced with greater amount of breath force than the other syllables in a word. The purpose in assigning stress is to mark one syllable per word as carrying prominence. So, there is a height of prominence on one syllable, and only one syllable per word can receive this prominence. The 'word stress' refers to the degree of intensity, muscular activity, or air pressure. Physiologically, a stressed syllable is said to be produced with a reinforced chest pulse. The basis of a syllable is a chest pulse – one contraction of the intercostals muscular in the chest.

An important feature of spoken English is word-accent. If a word has more than one syllable, one of syllables stands out from the rest. The syllable that is more prominent is said to receive the accent. According to Gimson, "the accentual pattern of English words is *fixed*,

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in the sense that the main accent always fall on a particular syllable of any given word, but free, in the sense that the main accent is not tied to any particular situation in the chain of syllables consisting a word" (Gimson, 1980, p.221) thus, in words such as *answer, finish*, the main accent is always on the first syllable. Similarly, the main accent falls regularly on the second syllable in words like *behind, together, impossible* etc., and on the third syllable in the words such as *articulation, understand, education*. But there is an exception to this statement; when a polysyllabic word having more than one accented syllable is said in isolation, a particular syllable receives the main accent. But if the same word is used in connected speech, the accentual pattern may change depending up on the rhythmic pattern of the utterance as a whole. For example, when the word '*thirteen*' is uttered in isolation, both the syllables receive accent and the primary accent placed on the second syllable: '*thir'teen*. But when the same word is said in a sentence like "he 'gave it for *'thirteen ru'pees*", the primary accent is located on the first syllables for the sake of the rhythmic pattern of the utterance as a whole.

In phonological structure of an English, word stress is very crucial. The placement of stress within a word brings change in grammatical category of the word as well as in the meaning of the word. For instance, in the case of the word '*conduct*', if the first syllable is stressed ('conduct), it will be taken as a noun which means '*behaviour*'. On the other hand, if the second syllable is stressed (con'duct), it will become a verb which means '*organise*'. Therefore, it is obvious that a wrongly stressed syllable is likely to be mistaken for some other word or for some other meaning (particularly in the absence of the context). Hence, stress is undoubtedly significant for intelligibility. To observe stress there are certain cues. According to Hyman (1975) pitch of the syllable (which goes up), the duration of the production of the syllable (which is relatively longer), the energy expended on the production of the syllable (which is relatively more) and the grammatical features of the entire word are the effective cues of stress (p. 207).

Daniel Jones (1956) made a point that prominence is an effect perceived objectively by the hearer. It is thus quite a different thing from stress, which is a subjective activity on the part of the speaker. Stress is only one of the means of achieving prominence. The prominence of a syllable may be due not only to stress but also to other phonetic features like the quality and quantity of sounds and pitch patterns.

There exists a wrong notion among second language acquisition researchers, teachers and students that pronunciation of a second language has little importance compared to that of syntax and lexis. But this is essential not only that second language learners should acquire the grammar system and vocabulary, but they should be 'intelligible' to other speakers of that language.

Bansal & Harrison (1991) noticed that several Indian speakers of English (due to ignorance and lack of training), very often mispronounce the accent, i.e., first syllable to

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second, second syllable to first syllable and so on. Different varieties of English spoken in India, differ in word accents, it may result in unintelligibility. Therefore, speakers need to follow a uniform word accent. Sethi & Jindal (1993) argue that it is necessary for English users of all regions of India to follow a uniform stress pattern (p.43). It is the fact that incorrect stress may lead speech intelligible. According to Roach (2009), due to incorrect stress, foreign speaker is not able to understand a word; the problem lies in wrong stressing rather than in a deficient pronunciation of a specific sound. It is indicated that intelligibility and comprehensibility are undermined specifically by faulty word stress. If the words are unintelligible to the learner due to wrong stress, listener may not comprehend the spoken language (Gallego 1990; Field 2005). Field (2005) further pointed out that if stress is wrongly distributed, it might have serious consequences for the listener to locate words in connected speech. Anderson-Hsieh, Johnson & Koehler (1992) emphasized that word stress may have an effect on comprehension more adversely than segmental errors.

2. Stress Change According to Function

There are a number of words of two syllables in which the accented pattern depends on whether the word is used as a noun, an adjective, or a verb. The accent is on the first syllable when the word is a noun or an adjective and accent is on second syllable when it is a verb.
Examples:

ˈObject (n)	obˈject (v)
ˈProduce (n)	proˈduce (v)
ˈProgress (n)	proˈgress (v)
ˈPerfect (adj)	perˈfect (v)

By a compound word we mean a word made up of two words written in conventional spelling as one, with or without a hyphen. Most of the compound words take the primary accent on the first element. For example, *ˈbackbone, ˈchurchyard, ˈgoldsmith*. Few words take the stress on the second element, for example, *weekˈend, afterˈnoon.*

3. Methodology

The present study was conducted to know non-English teachers' stress patterns in English speech to understand their stress variation in English. The speech samples were collected from twenty undergraduate teachers who were teaching non-English subjects in colleges affiliated to Osmania University, Hyderabad, India. A majority of subjects speak Telugu as their first language (L1). In the present study, researcher recorded a set of words from teachers. The recorded data had listened twice or thrice by the researcher to do phonetic transcription. Based on researcher's auditory impression, spoken data was analyzed. Maisa's (2016 & 2017) study was a similar study but it analysed undergraduate non-English teachers' segmental features and deviations.

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3.1 Limitations of the Study

Since this study is based on a small sample size and the spoken text was limited to a list of forty words. I believe that bigger sample size and connected speech spoken data in natural context would facilitate better generalization of findings which might unfold some stress patterns in spoken English of non- English teachers.

4. Data Analysis

Looking at the majority pattern of accentuation, it is noted that, there was a general tendency to accent, the first syllable of all words irrespective of the number of syllables it has. It is evident from the table (Table:1) that out of the 50 words, the majority pattern of accentuation of 21 words received stress on the first syllable, 11 words received on the second syllable, 8 words received stress on third syllable, 5 words received stress on the 4th syllable and only one word received stress on the fifth syllable.

The following words were stressed on the same syllable by all 20 speakers:

1. eˈlectic   2.   ˈpermit   3.   eˈlastic

The following words were stressed on the first syllable by majority of the speakers:

1) Accident 2) necessity   3) nobility 4) scientific 5) develop   6) permit
7) university 8) reflect 9) defense 10) disappear 11) degree 12) recommend
13) introduce 14) introduction 15) invitation 16) beautiful 17) ceremonial
18) electrician   19) temperature 20) defense 21) material

The following words were stressed on the second syllable by majority of the speakers:
1. electric 2. elastic 3. ambition 4. permission 5. electricity
6. sympathetic 7. responsibility 8. insensitive 9. disgust
10. defiance 11. possibility

The following words were stressed on the third syllable by majority of the speakers:
1. satisfaction 2. calculate   3. imitate   4. alignment
5.grammatical 6. composition 7. determine 8. application

The following words were stressed on the fourth syllable by majority of the speakers:
1. anticipate   2. participate   3.association   4. examination 5. articulate

The following word was stressed on the fifth syllable by majority of the speakers:
1.   Experimentation

The below table presented the percentage of speakers stressed on correct syllable and deviations from Received Pronunciation.

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Table 1: The percentage of speakers stressing at correct syllable and the percentage of speakers deviating from R.P

Sl. No.	The Accentual Pattern of R.P	% of the Speakers stressing on the correct syllable	% of Speakers stressing on the wrong syllable	Sl. No.	The Accentual Pattern of R.P	% of the Speakers stressing on the correct syllable	% of Speakers stressing on the wrong syllable
1	ˈaccident	75%	25%	26	deˈfiance	20%	80%
2	amˈbition	54%	46%	27	deˈgree	25%	75%
3	anˈticipate	25%	75%	28	recomˈmend	70%	30%
4	per ˈmission	70%	30%	29	associ ˈation	40%	60%
5	pronunciˈation	40%	60%	30	possiˈbility	40%	60%
6	satisˈfaction	70%	30%	31	compoˈsition	65%	35%
7	ˈcalculate	40%	60%	32	e ˈlastic	100%	0%
8	e ˈlectric	100%	0%	33	experimen ˈtation	15%	85%
9	ˈimitate	30%	70%	34	de ˈtermine	75%	25%
10	parˈticipate	10%	90%	35	examiˈnation	25%	75%
11	elec ˈtricity	30%	70%	36	introˈduce	35%	75%
12	ne ˈcessity	40%	60%	37	introˈduction	40%	60%
13	noˈbility	15%	85%	38	invi ˈtation	25%	75%
14	scienˈtific	35%	65%	39	ar ˈticulate	50%	50%
15	sympaˈthetic	40%	60%	40	re ˈmember	90%	10%
16	deˈvelop	15%	85%	41	ˈbeautiful	60%	40%
17	ˈpermit	100%	0%	42	appli ˈcation	45%	55%
18	uniˈversity	40%	60%	43	cere ˈmonial	45%	55%
19	responsiˈbility	45%	55%	44	elec ˈtrician	65%	35%
20	aˈlignment	35%	65%	45	la ˈborious	40%	60%
21	disapˈpear	0%	100%	46	ˈatmosphere	80%	20%
22	graˈmmatical	30%	70%	47	temperature	20%	80%

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23	inˈsensitive	60%	40%	48	de ˈfense	25%	75%
24	disˈgust	25%	75%	49	ma ˈterial	30%	60%
25	reˈflect	70%	30%	50	under ˈstand	35%	65%

From the above table, '*permit', 'electric', 'elastic'* were hundred percent (100%) conformity with the R.P pattern. On the other hand, words '*disappear'* deviates hundred percent (100%) from the R.P pattern. Based on the table, the general accentual pattern of the word category and different affixes were discussed here.

Table 2: The Syllabic division of each word

Dysyllabic	Trysyllabic	Tetrasyllabic	Pentasyllabic	Hexasyllabic
Permit	Accident	Anticipate	Pronunciation	Responsibility
Disgust	Ambition	Satisfaction	Electricity	Experimentation
Reflect	Permission	Participate	University	
Degree	Calculate	Necessity	Association	
Defense	Electric	Nobility	Possibility	
	Imitate	Sympathetic	Examination	
	Scientific	Grammatical	Ceremonial	
	Develop	Insensitive		
	Alignment	Composition		
	Disappear	Introduction		
	Defiance	Invitation		
	Recommend	Articulate		
	Elastic	Application		
	Determine	Electrician		
	Introduce	Laborious		
	Remember	Material		
	Beautiful			
	Atmosphere			
	Temperature			
	Understand			

Majority pattern of accent on the two syllable words stressed on the first syllable; out of twenty, three syllable words, majority of the speakers stressed on first syllable. Out of sixteen, four syllable words, majority of words stressed on the first syllable. Moreover, all five syllable words were stressed on the fourth syllable by the majority of the speakers.

4.1 Highest Degree of Variation of Words

The highest degree of variation is found in three, four, five and six syllable words.

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1	ˈambition	--	Stressed on the first syllable by 2 speakers
	am ˈ bition	--	Stressed on the second syllable by 12 speakers
	ambi ˈtion	--	Stressed on the third syllable by 6 speakers
2	ˈanticipate	--	Stressed on the first syllable by 4 speakers
	an ˈ ticipate	--	Stressed on the second syllable by 5 speakers
	antici ˈpate	--	Stressed on the fourth syllable by 11 speakers
3	pro ˈnunciation	--	Stressed on the second syllable by 2 speakers
	pronun ˈciation	--	Stressed on the three syllable by 8 speakers
	pronunci ˈation	--	Stressed on the fourth syllable by 8 speakers
4	ˈparticipate	--	Stressed on the first syllable by 8 speakers
	par ˈticipate	--	Stressed on the second syllable by 2 speakers
	partici ˈpate	--	Stressed on the fourth syllable by 10 speakers
5	ˈ sympathetic	--	Stressed on the first syllable by 2 speakers
	sym ˈ pathetic	--	Stressed on the second syllable by 12 speakers
	sympa ˈ thetic	--	Stressed on the third syllable by 8 speakers
6	ˈuniversity	--	Stressed on the first syllable by 10 speakers
	uni ˈversity	--	Stressed on the third syllable by 8 speakers
	univer ˈsity	--	Stressed on the fourth syllable by 2 speakers
7	ˈ grammatical	--	Stressed on the first syllable by 5 speakers
	gra ˈmmatical	--	Stressed on the second syllable by 6 speakers
	gramma ˈtical	--	Stressed on the third syllable by 9 speakers
8	ˈexperimentation	--	Stressed on the first syllable by 1 speaker
	experi ˈmentation	--	Stressed on the fourth syllable by 6 speakers
	experimen ˈtation	--	Stressed on the fifth syllable by 13 speakers
9	ˈ invitation	--	Stressed on the first syllable by 10 speakers
	in ˈvitation	--	Stressed on the second syllable by 2 speakers
	invi ˈtation	--	Stressed on the third syllable by 8 speakers
10	ˈarticulate	--	Stressed on the first syllable by 4 speakers
	ar ˈticulate	--	Stressed on the second syllable by 5 speakers
	articu ˈlate	--	Stressed on the fourth syllable by 11 speakers

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5. Findings and Conclusion

After studying the word accentual patterns of teachers' spoken data, the following findings and conclusions can be drawn.

1. There was not much difference between a stressed and an unstressed syllable in their speech. There was a vast difference between the R.P word accentual pattern and teachers' accentual patterns.
2. Since there is no one to one correspondence between spelling and pronunciation in English. It was found that they had spelling based pronunciation.
3. There is general tendency among most of the speakers to accent the first syllable of English words.
4. Out of the fifty word test items, twenty two words received stress on the first syllable by majority of the speakers.
5. Eleven items received stress on the second syllable by majority of the speakers.
6. Out of the fifty words, accentuation of fifteen items percentage is conformed to R.P.
7. The accentuation pattern of 44 words deviated by majority of the speakers with that of R.P.
8. The accentuation pattern of 2 words confirmed 100 % with R.P by all the speakers.
9. The number of syllables in a word had no bearing on the accentuation pattern of the speakers.
10. Words like '*ambition*', '*anticipate*', '*pronunciation*', '*participate*', '*sympathetic*', '*university*', '*grammatical*', '*experimentation*', '*invitation*', '*articulate*', have shown the highest degree of variation.

This study has revealed certain features of word-accent deviations in English as spoken by the undergraduate Teachers. According to Bansal, "accent on the wrong syllable of the word is a major factor which is most frequently responsible for the unintelligibility of Indian English" (Bansal.R.K.1969, p.150). Teaching profession is an important profession and certainly, there is a great need for the teachers to make them intelligible to all kinds of people. In fact, teachers who have the great extent of deviation from R.P, it is the time to improve pronunciation of Indian teachers through teacher development programs. The English spoken by the teacher and learners need to be understood in Indian and international context. So, they need to be intelligible to the listener in any context (Indian or overseas). It is suggested that these undergraduate teachers of different subjects need to be given training to improve their English pronunciation.

6. Recommendations

When student of a second language or foreign language, who had some instruction according to the usual methods, initially hears the spoken language and fails to understand what has been said. Students usually claim that vocabulary of the utterance was too difficult for them.

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In teaching English pronunciation, we soon see that there is very little help that we can get from the spelling of the words. For example, these words *through, cough, hiccough, though* are pronounced in different ways though the spelling of the underlined part is the same. On the other hand, the word *need, read, believe, machine, receive, we, people, key* contain eight different spellings for the same vowel sound */i:/.*

Since English is not always spelt in a manner consistent with its pronunciation the students need every possible aid to learn the pronunciation of words which they may see for the first time.

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