

Stress in the Educated Nigerian Accent of English (ENAE): The Acoustic Analysis

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Abstract

This study examined the acoustic analysis of stress in the Educated Nigerian Accent of English (ENAE). The aim is to identify and characterize the nature of this variety of English. Consequently, twenty subjects (20) out of sixty (60) subjects who are Nigerian English speakers and educated in the English language were selected by a Stratified Random Sampling (SRS) technique. A native speaker of English was used as control. Education in the English language was the major criterion for stratification. The subjects were selected from two Federal Universities in Nigeria and they were required to read a short passage containing selected words in citation form and selected utterances at normal conversational speed into an audio-device. Their performances were recorded and analyzed acoustically using a computer software called 'Praat version 5.3 (2023.)' to dictate the variations within and across the three categories: A (BA students), B (MA Students) and C (PhD Students). Their performances were compared with those of the native English speaker who served as control. Attached mainly to the Metrical Theory (MT), the study showed that in the ENAE, typified by the subjects (representatives), the ENAE speakers have a tendency to stress more syllables than the native speaker (control) which corroborates other researchers such as Udofot (2011), Eka (2011) and Gut (2003); the stress pattern of the ENAE differs significantly from that of the native speaker's variety (control).

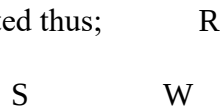
Introduction

The researcher's interest in this study was in stress as examined in some words and utterances. Therefore, the analysis was done taking stress as a prominent relation based on the

alternation of strong (S) and weak (W) syllables. The researcher analysed stress patterns (acoustically) of the experimental group and that of the Control as having their bases in rhythm.

Theoretical Framework: The Metrical Theory (MT)

The Metrical Theory is a theory of word stress or linguistic prominence; a situation where prominence of a unit is defined relative to other units in the same phrase. The theory has the following assumptions: Stress is represented in the form of metrical patterns and this metrical patterns are trees with node labels (S) (Strong) and (W) weak and that these trees should be ‘oriented’ or rooted; meaning that any such tree is always a single constituent at the higher level e.g. the word ‘gently’ is represented thus;



In this way, a syllable is strong or strongly stressed or accented relative to its neighbouring syllable which is weak. Again, a syllable is said to be weak gent ly close to it. Metrical Theory again maintains that metrical patterns are rooted, oriented trees with (at most) binary branching and node labels S and W, in which every binary constituent must be either [SW] or [WS]. Stressed and unstressed syllables alternate in speech. The researchers applied this in this (study) analysis and predicted such structures which helped in the conclusions about prominent ‘S’ and contiguous ‘S’s and to identify other obscure structures in our data. This metrical analysis can be applied to natural languages/utterances. Consequently, the metrical approach to this paper is considered most appropriate as it shows how important or relevant this theory is to natural or every day English speech and as our analysis revealed. This Metrical phonology makes it easier to solve the problem of stress clashes and this helped in our acoustic analysis to know the number of stresses observed and the number of stresses expected of the control.

Key: R = Root

S = Strong (Syllable)

W = Weak (Syllable)

Conceptual explanations/notations.

Stress:

The English language is often regarded as a stress-timed language. As a supra segmental feature, many linguists: (Chomsky and Halle) (1961); Liberman and Prince (1977), among others, observed that the definition of stress is one of the perennially debated and unsolved problems of phonetics. Roach (2007), defines stress as the relative strength of a syllable. This means that stress is that feature which makes a particular syllable/ in a word more prominent than others. By perception, stress, according to some linguists, is realized as a combination of INTENSITY, PITCH VARIATION, VOWEL QUALITY AND VOWEL DURATION. These features are relevant at the word level as well as the sentence level. Many researches have been conducted to determine the level of importance of each of these phonetic cues of stress in English utterances. For instance, Fry (1958) and Lehiste (1970) observed in Peng and Ann (2001) that changes in Fo (Pitch) are the most important cues to English stress; duration is next, followed by loudness. Similarly, Cutler and Darwin (1981) suggested that English stress can be identified on the basis of duration and intensity (amplitude) without reference to Fo (pitch) variations. The source concludes that duration might be the most important cue to English stress. Fry (1958), Adams and Munro (1978), Utin (2023), Enang and Utin (2023) also observe that duration is more important than loudness in English. Egbokhare (1994) maintained that pitch modulation rather than increase in pitch, signals stress and points at segmental quality as the least salient phonetic cue to linguistic

stress. Stress is considered from the foregoing as a complex aspect of the analysis at both the phonetic and phonological (Utin, 2024) levels of speech and utterances.

Bobda (2010) also confirmed the complexity and variability in time and space and some degree of predictability of stress. Some other languages such as French, have their stress falling on a particular syllable of a word (initial, final, and so on), but the English stress pattern is free', in the sense that it can fall on any syllable. That was why Strang (1955) described the English stress pattern as being "Chaotic". However, certain suggestions from O'connor (2004) and Jones (2006) are that stress placement is treated as a property of the individual word and that stress should be learnt alongside the word. One thing is common to all these views about stress: they at least agree that a perceived stressed syllable generally corresponds to a syllable with a higher Fo (Pitch), longer duration and/or increased loudness, whereas an unstressed syllable generally has a lower Fo (pitch) peak, shorter duration and/or decreased loudness. These correlates of stress: Fo (Pitch), durations, amplitude (intensity) and loudness of the prominent (stressed) syllables, words and utterances reveal their important roles in the stress patterns of the Educated Nigerian Accent of English (ENAE). Nevertheless, certain rules were drawn up by some linguists to conquer the complexities in the stress pattern of English words (for the grammatical categories).

Stress and Accent

Various researches have explained the terms 'Stress' and 'accent' in different ways. For instance, Clark and Yallop (1990) opined that what is referred to as word stress or lexical stress may be referred to also as word accent or lexical accent (p. 288). In a loose manner, stress could be seen as the reality and major factor in rhythmic organization which serves as a unifying marker around which the 'rhythm of speech is organized' (Allen 1972, P. 192). This means that the proper

arrangement of stressed syllables produces rhythmic patterns. Sommerstein (1977) agrees that both stress and accent have ‘prominence’. Some syllables are produced with greater intensity (greater force) with which air is expected from the lungs, which makes a difference in loudness. That difference in loudness is referred to as accent (MC Arthur, 1996). In phonetics and linguistics, accent may mean stress prominence of a syllable while in some theories accent is the tonicity of syllable e.g. in the following: What a reMARKable idea! What a remarkable iDEa, the tonicity is on MARK and DE. These are different syllables that are outstanding in the midst of other syllables.

There are so many views about accent. In sociolinguistics, accent is a way of speaking which indicates a person’s place of origin and/or social class e.g a working class accent, a London accent, a regional accent, an American accent etc. The term accent is sometimes loosely used to mean stress, referring either to prominence in a general way or more specifically to the emphasis placed on certain syllables. It follows that accent is the remote realization of prominence, and stress, the immediate realization of prominence. In linguistics, the term ‘stress’ is identified with the British school.

The cause of the prominence in the spoken syllables or words is complex. Bloomfield (1933) sees stress as “speaking one of (the) syllables (in) a word” louder than the other or others (P 90). Also, Trager and Smith (1957) use the terms (stress and accent) to mark primary, secondary and tertiary stresses and these stresses are called accents (P. 245). Stress involves notionally; emphasis, weight, intensity, sound pressure etc. (Crystal 1969, P 113); Jones (2004) see stress as “the degree of force with which a sound or syllable is uttered”. Roach (2004) also defines accent as “stress”. Bolinger (1958b) proposes to use the term accent for prominence in the utterance. In the author’s view, a syllable is heard as accented only when it has pitch prominence. That brings in emphasis on words or utterances. That emphasis is stress; referring to which part of a word or an utterance is more

prominent than the others around it in pronunciation. The stress is on syllables. Ramsaran (1990) describes “accent” as auditory prominence imparted to a syllable (P 22). A syllable is a unit into which a word is divided which contains vowel sounds and usually one or more consonants.

In conclusion, the majority of linguists described ‘accent’ as stress’. In this study, it is maintained that despite the pros and cons about stress and accent, both signal “prominence”. The Greeks employed three grammatical accents: (1) the acute accent (/); (ii) the grave accent (\); (iii) the circumflex accent, (composed of both the acute and the grave (^). In this study, the researchers used stress to mean the mark of prominence and ‘accent’ as a way of speaking by a people in a more general sense. Accent can also be regarded as pitch (tone), an auditory sensation which places sounds on a scale from low to high in vowels produced by the human voice. The listener hears a high pitch if the rate of vibration is high and a low pitch if the rate of vibration is low.

Methodology

Twenty (20) Educated Nigerians of different sociolinguistic backgrounds who are Educated in the English language and a native speaker of English formed the sample. The data was obtained from the Nigerian population using the stratified Random sampling (SRS) technique. The yardstick for stratification comprised those who were educated in the English language and the Mother Tongue (MT) (or indigenous languages). The researchers’ assumption was that the subjects chosen have had sufficient education in the language to be able to express themselves in an accent that is both nationally and internationally intelligible since according to Bansal, (1990, P 219), “proficiency in a second or foreign language is usually the result of training”.

The subjects were categorized into three A,B and C. Category A consisted of final year First Degree students of English, Category B were mainly Master’s Degree students of English

which Category C comprised mainly Doctoral Degree students of English. All were from two federal universities in Nigeria – the University of Uyo, Uyo, Akwa-Ibom State and the University of Port Harcourt, Rivers State. These categories of students have been for several years, studying the English language and using it for daily conversations and official purposes. One hundred and sixty – seven (167) subjects were randomly selected from the two federal universities after stratification. Their performances were recorded. The aim was to record the effect of high level of Education in the English language on the stress patterning of our subjects.

The diverse ethnic groups or geopolitical zones of the Nigerian nation were reflected by selecting subjects from the two federal universities. This was done in order to capture the sociolinguistic influence on language, although, this was treated as an intervening variable.

In the final analysis, the sample consisted of twenty Educated Nigerian speakers who are educated in the English language and who were taught by different linguists, some of whom were native speakers. The subjects were five (5) BA students, nine (9) MA students and six (6) PhD students. Their ages were between twenty (20) and seventy – five (75) years and they represented the five geopolitical zones out of six (6) in Nigeria (see Appendix1). The control was a native English speaker aged 74 who spoke English as her first language (L1). Although she lives and works in Nigeria, she has a clearly defined English accent.

Acoustic Analysis: presentation of Data

Stress and duration of acoustic Data.

Using a computer software called Praat version 5.3 (2023), the researchers were able to get from the control and the three representatives of Categories A, B and C, the pictorial representations (waveforms) of the utterances: ‘Can you recommend somewhere for a holiday?’

and ‘I recorded them on cassette’, showing word duration, syllable duration, utterance duration, overall tempo and amplitude (intensity) of the stressed and unstressed syllables.

Generally, in the durations of utterances and words analyzed, the researchers observed that of the twelve (12) syllables in utterance one (UI): ‘Can you recommend somewhere for a holiday? The syllables in ‘-mend’ and ‘-where’ had the highest mean duration of 0.48 secs each, followed by ‘hol’ in ‘holiday’ (0.46 secs). Other syllables were recorded in the order as shown in Table 1b. The lowest mean duration was recorded for the syllable [kðn], 0.15 secs, followed by [ju:] which was 0.24 secs. Differences in duration were also recorded in the two utterances and the two words selected. Details of the performances of representative subjects of the three Categories (A, B and C – experimental group) and the control are in Tables 1a – 4. Results of the acoustic analyses of Utterance One (UI); Utterance Two (U2), word one (W1) and word Two (W2) for duration and amplitude (intensity) are also shown. Word One (W1) and Word Two (W2) for duration and amplitude (intensity) are also shown below while the visual displays of U1, U2, W1 and W2 which show the relevant data to this area are shown in Appendices A – E

The Tables below (Tables 1a – 4) report the values of different tests and analyses done on the vocal samples we got using a computer. The researchers took into consideration, the ratio of voice/signal to noise ratio by using an earphone, due to the fact that these samples were taken in rooms and not in a soundproof studio or audio sampling laboratory.

Duration in the Educated Nigerian Accent of English (ENAE)

Table 1a: Word duration (W1): Recommend: Word One (W1)

Subject	Category	Word	Duration in seconds
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Control W1	Control		0.63
(MSS17) BA W1	A (BA)		0.57
(MSS31) MA W1	B (MA)	recommend	0.56
(MSS45) PhD W1	C (PhD)		0.54
Mean duration			0.56

Table 1b U1: Syllable Duration

Subject	[k θn]	[ju:]	[re]	[k θ]	[mend]	[s^m]	[we θ]	[f θ]	[r θ]	[hD]	[I θ]	[dei]
Control U1	0.19	0.31	0.31	0.44	0.32	0.25	0.24	0.55	0.44	0.55	0.44	0.36
BA U1	0.22	0.22	0.43	0.23	0.99	0.27	0.35	0.75	0.18	0.41	0.32	0.28
MA U1	0.10	0.28	0.44	0.19	0.22	0.29	0.90	0.22	0.55	0.40	0.28	0.25
PhD U1	0.13	0.23	0.36	0.50	0.23	0.29	0.18	0.22	0.43	0.57	0.43	0.42
Mean Duration in secs	0.15	0.24	0.41	0.31	0.48	0.28	0.48	0.40	0.39	0.46	0.34	0.32
	Can	you	re	com	mend	some	where	for	a	ho	li	day

Table 1c U1: Utterance Duration

Subject	U1 duration in secs
Control	2.46
(MSS17) BA	2.49
(MSS31) MA	2.20
(MSS45) PhD	2.53
Mean duration	2.41

Table 2a: Word Duration (W2)

Cassette (Word 2)

Subject	Category	Word	Duration in seconds
Control W2	Control		0.65
(MSS17) BA W2	A (BA)		0.48
(MSS31) MA W2	B (MA)	Cassette	0.51
(MSS45) PhD W2	C (PhD)		0.78
Mean duration			0.59

Table 2b U2: Syllable Duration

Subject	[ai]	[ri]	[kɔ:]	[did]	[ðm]	[Dn]	[k θ]	[set]
Control U2	0.04	0.29	0.28	0.17	0.34	0.19	0.56	0.51
(MSS2) BA U2	0.09	0.15	0.61	0.60	0.30	0.17	0.20	0.28
MSS31 MA U2	0.15	0.20	0.26	0.62	0.24	0.18	0.19	0.33
(MSS45) PhD U2	0.17	0.17	0.17	0.20	0.28	0.32	0.22	0.55
Mean Duration	0.14	0.17	0.35	0.47	0.27	0.22	0.20	0.39
In secs	I	Re	Cor	ded	them	on	ca	ssette

Table 2c U2: Utterance Duration

Subject	U2 duration in secs
Control	1.90
(MSS17) BA	1.58
(MSS31) MA	1.73
(MSS45) PhD	2.06
Mean duration	1.79

Table 3 Amplitude (Intensity) in the Educated Nigerian Accent of English (ENAE)

	dB	dB	dB	dB
Subject	U1	U2	W1	W2
Control		821	525	69
(MSS17) BA	766	507	69	59
(MSS31) MA	852	590	74	71
(MSS45) PhD	858	576	74	68
Mean Duration in dB				
For the experimental group	825	557	72	66

Table 4: Overall Tempo in the Educated Nigerian Accent of English (ENAE)

	U1	U2	W1	W2
Subject	Secs	Secs	Secs	Secs
Control	2.46	1.90	0.63	0.65
(MSS17) BA	2.49	1.58	0.57	0.48
(MSS45) MA	2.20	1.73	0.56	0.51
(MSS45)PhD	2.53	2.06	0.54	0.78
Mean duration in secs	2.41	1.79	0.56	0.59
For the experimental group				

There were differences in the overall speed (tempo) of the utterances and words as shown above between the performances of the representative members of the experimental group and the control.

Discussion

Stress and Duration

The researcher hypothesized that ENAE features more stressed syllables than the SBAE represented in this study by the control. In both the words and utterances, the subjects had more stressed syllables than the control. In other words, the control had more unstressed syllables than the subjects. For instance, Control had three (3) stressed syllables in Utterance One (U1). The metrical representation of the utterance (U1) in Tables 5a – 5d showed that the three representatives of the Categories (A, B and C), had in the following order; BA (Category A) representative: seven (7) stressed syllables; MA: four (4) stressed syllables and PhD: six (6) stressed syllables. The BA subject (representative) had five (5) stressed syllables more than the control, the MA subject (representative) had five (5) stressed syllables more than the control, the MA subject (representative) had two (2) extra stressed syllables and the PhD representative had three (3) extra stressed syllables.

The researchers observed that the closest to the control was the MA representative and the farthest from the control was the BA representative. From the data obtained, the researchers noted that all the subjects (representatives of the Categories) had more stressed syllables than the control. In Utterance 2 (U2), similar results were also obtained: the BA subject had five (5 prominent) stressed syllables i.e. three (3) extra prominent syllables compared to that of the control that had only two (2). The closest was the MA representative who had three prominent syllables i.e. one (1) extra stressed syllables when compared to the Control's. The PhD representative also had a total of five (5 prominent) stressed syllables i.e. three (3) extra stressed syllables as the BA subject. The better performance of the representative of the MA group may be as a result of his individual proficiency in the language.

The experimental group had mean durations of 0.56 secs and 0.59 secs respectively for the two selected words, W1 and W2. These values were less than those of the control who had 0.63 secs (W1) and W2. These values were less than those of the Control who had 0.63 secs (W1) and 0.65 secs (W2) respectively. The researchers can explain this from the angle of syllable duration where the values for unstressed or reduced vowels were produced with higher durations by the control when compared with the performance of the experimental group. For instance, in utterance 1 (U1): ‘Can you recommend somewhere for a holiday?’, the control used a longer time in pronouncing some unstressed syllables e.g. ‘for’ (0.55 secs) and ‘a’ (0.44 secs) whereas the experimental group, BA subject, had ‘for’ in 0.75 secs and ‘a’ in 0.43 secs. In some cases the experimental group used longer time pronouncing the stressed syllables while the control used shorter time in pronouncing the stressed syllables (see values for the syllable durations in Tables 1b and 2b). For the syllable ‘some’, the control had the duration of 0.25 secs whereas the subjects had; BA, 0.27 secs, MA, 0.29 secs and PhD, 0.29 secs. These are higher values when compared to the control’s output. There is a tendency to stress almost every syllable in an utterance. This brought about more stressed syllables in the performance of the subjects (experimental group) than that of the control.

Many linguists (Wells, 1982; Eka; 1985; Jowitt, 1997; Udofot, 2003, among others) on Nigerian English and accent opine that the native speaker’s stress and rhythmic patterns are different from the Nigerian English speakers’ varieties and that the native speaker spends more time in pronouncing the stressed syllables than Nigerian English speakers. The researchers also observed that to be true but not consistently. In some instances, some of the subjects spent more time in pronouncing the stressed syllables than the control. The reason was that the native speaker (control) spent more time in pronouncing some short vowels as in [k θn], long vowels as in [ju:],

unstressed or reduced vowel as in [k ə] [ə] [k ə] in ‘cassette’ [ri] in recorded (See Tables 1b and 2b). Another reason, observed, was indeterminacy in syllabification etc (on the part of the speaker).

There were variations in the performances of the subjects in each Category. For example, the BA representative used 0.23 secs for U1, MA, 0.19 secs and PhD, 0.50 secs to realize the syllable [kə] in ‘recommend’ against that of the control who used 0.44 secs which was also on the high side as the PhD representative. Succinctly, the ENE speakers do not necessarily use duration and pitch to mark stress but tone. Therefore, the case that ‘the native speaker spends more time in pronouncing the stressed syllables and less on the unstressed while the Nigerian English speakers spend more time in pronouncing unstressed syllables and less on stressed syllables’ is to an extent reversed with what the researchers observed in the data obtained. Consequently, the researchers proposed that time or duration of syllables, words or utterances are independent of stress or that duration is not a major cue to stress in the ENAE. This means that the amount of time used by both the control and the subjects (ENE speakers) in pronouncing syllables, words and utterances did not in any way affect the production of strong (S) or weak (W) syllables. Duration of time could only be a cue to prominent syllables but it was actually tone that signaled the prominent syllables in the ENAE, contrary to Fry (1995), Adam and Munro (1978), Cutler and Darwin (1981), Peng and Jean (2001), who observed that duration, might be the most important cue to stress.

Syllables that were not normally stressed or unstressed in the control’s performance were stressed by the subjects, Educated Nigerian English (ENE) speakers, resulting in the superfluity of prominent syllables. Thus, the researchers agree with Bansal (1990), Martens (1990) and Lanham (1990), among others, that proliferation of stressed syllables characterizes non-native Englishes including Nigerian English. And the researchers observed that there was no significant

difference among the three representatives of the three Categories but there was a significant difference between their performance as a whole and that of the control.

Udofot (1997, p.97) observed that the tendency to accent (stress) more syllables than a native speaker is more pronounced as one descends the ladder of quality from the sophisticated to the standard and to the non-standard. This observation is similar to what was observed. Although, only one accent was observed (the educated), the researchers noticed that the tendency to stress more syllables than the native (control) is more pronounced as one descends the ladder of quality from PhD to MA and BA (See Table 6-statistical Significance of deviation). This observation differs in the acoustic analysis (See Tables 6a-6d) in a way that sometimes more stressed syllables were found in that of the PhD or MA representative than in that of a BA representative. The subjects intermingled in the researchers' parlance, which means that more prominent syllables could be found in any of the performances (not predictable among MA, BA or PhD).

It was observed that the control used longer time in pronouncing W1 (recommend – 0.63 secs) and W2 (cassette – 0.65 secs) The values were higher than those of the experimental group except the PhD representative who used 0.78 secs to pronounce 'cassette', which is higher than that of the control but their mean durations were shorter than those of the control (0.59 secs and 0.56 secs respectively). The reasons could be that there was a short and an unstressed syllable in the word 'recommend' which the control used a longer time to pronounce than the only stressed syllable in it (mend). The same goes for the word 'cassette' where it was only one unstressed and one stressed syllable. The control also observed pauses and was relaxed in the pronunciation of these words while the subjects hurried over the pronunciations.

In utterance duration, it was noted that the duration was not consistent with U1, in the sense that the durations of some of the subjects were longer, but taken as a whole, the mean duration was less than that of the control. It also implied that the control took more time in pronouncing the utterance (U1) than the experimental group. In U2, the control's duration was longer than those of BA and MA representatives except the PhD representative with 2.06 secs against the control's which was 1.90 secs. The BA representative had 1.58 secs while MA representative has 1.73 secs. The mean duration, 1.79 secs was also shorter than that of the control (1.90 secs).

On the average in word and utterance durations, the control invariably used longer durations than the experimental group except in a case (0.78 secs for the word 'cassette') mentioned earlier. The present study showed that in the ENAE, word and utterance durations are relatively shorter than were observed in the native speaker variety of English represented by the control. This long duration in the control's output could be caused by the tendency to produce reduced vowels with long durations instead of shorter durations which caused an additional longer time to the stressed syllables. However, some stressed syllables were pronounced with shorter durations by the control when compared with those of the subjects.

The stress pattern of the ENAE, as was observed, is not generally the same as the Standard British Accent of English (SBAE). This is contrary to what Ufomata (1990 p.215 in Udofot, 1997, p.98) claims, that the stress pattern of individual words in the speech of Nigerians who speak the standard form of Nigerian English is generally the same as RP. But the evidence lends more weight to the hypothesis 3 which states that the stress patterns of the ENAE is different from the native speaker's variety.

Amplitude (intensity)

Amplitude is always viewed as perceived loudness caused by the intensity, or vocal changes of the speaker (Clark and Yallop 1993, p.208). This means that the higher the intensity of the vocal folds vibration (pitch), the louder a speech sound is perceived to be. As a general rule, the greater the intensity, the larger the amplitude, the louder a speech sound is perceived. Amplitudes are always positive. Greater intensity ushers in loudness and loudness means prominence. This means that amplitude is a correlate of stress. Therefore, amplitude is discussed in terms of intensity. Data showing the amplitude (intensity) of utterances 1 (U1) and 2 (U2), W1 and W2, as pronounced by the control and the three representatives (subjects) of the three (3) Categories, A, B and C, are shown in Table 3. It was noted that the three representatives had higher amplitudes (intensity) than the control, except the BA representative who had less amplitude in U2, the same in W1 as the control and less in W2. The rest of the values were greater than that of the control despite the fact that the computer was set at loud for all the recordings (See the spectra of the amplitude (intensity) in the Appendices (A-E). This larger amplitude for the experimental group as earlier noted means greater intensity and loudness. The greater intensity (amplitude) values for the experimental group were caused by the tendency of the subjects to increase their pitch successfully in a stretch of an utterance.

Overall Tempo in the Educated Nigerian Accent of English (ENAE)

Details of the overall tempo (speed) or total duration of the experimental group and the control in U1 and U2, W1 and W2 are shown in Table 4. Since the control took longer time in pronouncing both the words and utterances, it means that the overall tempo (speed) is slower in the two utterances and two (2) words than that of the experimental group (the educated class). Also, in syllable duration, longer time was taken by the control in many cases to pronounce the syllables. (See the Tables). The use of longer time in the pronunciation of stressed syllables by

the control was not consistent and the use of longer time by the subjects to pronounce the unstressed syllables was also not consistent. The control's overall tempo was generally or relatively slower than that of the experimental group, because, longer duration in pronunciation resulted in slower speed (tempo).

CONCLUSION

The three representatives of the three categories (A, B and C) have a similar tendency to stress many prominent syllables as confirmed in the words and utterances analyzed, which is different from that of the native speaker (Control). Although, there were slight variations among and within the three categories, the performances were not significantly different from one another.

Appendix 1

Sociolinguistic Table

The subjects used for the analysis represent some states and Linguistic Groups in Nigeria as shown in the Table below:

Subject	Sex	Age	State	Ethnicity	Geopolitical zone	Degree	Department
MSS 17	M1	41	Ogun	Yoruba	*SW	PHD	English language
MSS 21	M 2	26	A/Ibom	Ibibio	*SS	PhD	English language
MSS 22	M 3	30	-	-	-	MA	English language

MSS 23	M 4	36	Rivers	Ogoni	SS	MA	English language
MSS 27	M 5	45	Osun	Yoruba	*SW	PhD	English language
MSS 30	M 6	27	A/Ibom	Ibibio	SS	MA	English language
MSS 33	F7	25	Ebonyi	Igbo	*SE	MA	English language
MSS 36	M 8	25	Nasarawa	Hausa	*NC	MA	English language

Subject	Sex	Age	State	Ethnicity	Geopolitical zone	Degree	Department
MSS 41	M 9	30	C/River	Efik	SS	BA	English language
MSS 42	M 10	28	Katsina	Hausa	NW	BA	English language
MSS 43	M 11	26	Jigawa	Hausa	NW	BA	English language
MSS 46	F 12	35	Niger	Hausa	NC	PhD	English language

MSS 48	F 13	29	A/Ibom	Ibibio	SS	MA	English language
MSS 50	F 14	44	Ogun	Yoruba	SW	BA	English language
MSS 51	M 15	37	A/Ibom	Ibibio	SS	MA	English language
MSS 52	F 16	34	A/Ibom	Ibibio	SS	MA	English language
MSS 53	F 17	23	A/Ibom	Ibibio	SS	BA	English language
MSS 55	M 18	47	Imo	Igbo	SE	PhD	English language
MSS 57	M 19	43	Imo	Igbo	SE	PhD	English language
MSS 60	M 20	34	C/River	Efik	SS	MA	English language

SUBJECTS

BA = 5

MA = 9

PhD = 6

20

Female (F) = 10

Geopolitical zones (GPZ) represented:

SW – South-West

SS – South-South

SE – South-East

NC – North-Central

NW – North-West

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