

# VOWEL REDUCTION IN THE ENGLISH OF EDUCATED EDO (NIGERIAN) ENGLISH SPEAKERS

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## Abstract

Educated Edo English (EEE) is a sub-group of Nigerian English (NigE), one of the ‘new Englishes’. Phonological studies on NigE rhythm have been on the major ethnic (Hausa, Igbo, Yoruba) and a few minority group (Isoko, Urhobo, Eka, Ibibio) while studies on EEE vowel reduction is rare. The aim of this study is to find out whether or not EEE speakers vowel reduction conform to earlier description of other NigE varieties. A Briton served as the Native Baseline while two (100 males and 100 females) hundred university undergraduates, who speak Edo as their mother tongue served as participants. Twenty English words with suffixes [-ic, -y, -ial, ian, -ion] served as instrument. Each participant produced the test items into a PC Speech Filing System (SFS). This was subjected to auditory, acoustic and statistical analyses, complemented with Rhythm Ratio (RR), and metrical grid which accounts for rhythmic alternation in Standard English. Overall, EEE speakers had 103 (2.60%) instances of appropriate use out of 4000 expected correct use. Males’ performance was 50 (1.30%) while females had 53 (1.30%). Rhythm Ratio shows NB vowel duration as (74.1RR/72.9RR) for tilting towards stress-timing and EEE speakers as (7.49RR/10.49RR), tilting towards syllable-timing. Metrical grids revealed proliferation of strong vowels by EEE speakers. This re-affirms results from earlier researches that NE, of which EEE is a sub-variety, is not stress-timed but syllable-timed.

**Keywords:** *Educated Edo English Speakers, Nigerian English rhythm, Vowel reduction, Standard English, Rhythm Ratio*

## 1. Introduction

Nigeria is known for its linguistic diversity as over 522 living languages, including English have been attested as spoken across the country (Akindele, 2019, 2020). Contact of these local languages with the English language has brought about the term ‘Nigerian English’ (NigE). Several linguists (Jowitt, 1991; Udofot, 2003; Akinjobi, 2006; Adesanya, 2021) have established that NigE differs systematically from Standard English (SE) especially in the area of phonology. NigE itself has been observed to have sub-varieties reflecting its multilingual environment. Some of these sub-varieties are Yoruba, Igbo and Hausa Englishes, which constitute the three major languages in Nigeria, have been vigorously researched while others

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especially vowel reduction of Educated Edo English Speakers - a minority group, have been scarcely investigated. Also, unlike, earlier studies, the study adopt Rhythm Ratio (RR) acoustic measures, due to its acoustic values to account for a more tenable result for EEE rhythm. Meanwhile, in SE, the addition of certain suffixes to root words brings about a shift in stress to another syllable due to the change in vowel quality and duration. Earlier linguists (Eka, 1993; Akinjobi, 2006; Akinjobi & Akindele, 2016) have observed that this phonological phenomenon is minimally used in NigE rhythm. The fact that over 522 living languages (Akindele, 2018) have been attested as spoken in Nigeria including English makes this study relevant. Existing studies on NigE rhythm have been on the major ethnic (Hausa, Igbo and Yoruba) group, and a few minority group (Ibibio, Eka). Findings from the major ethnic group and a few minority group researched cannot be used to generalise for NE rhythm, Therefore, the fact that over 250 ethnic groups have been attested for Nigeria (Akindele, 2020) makes this study relevant. Therefore, more phonological investigations from other sub-varieties need to be researched in order to make concrete claim for NigE. Furthermore, investigations from other minority group like Edo English speakers in Nigeria will allow linguists to explore areas of convergence and divergence. This study, therefore, becomes relevant because it will help to contribute to the current debate on the need for the standardisation and codification of NigE among ‘world Englishes. Using a geo-tribal approach therefore, the investigation sets to find out whether or not Educated Edo English speakers vowel reduction pattern conform to earlier description of other NE varieties. The following research objectives guided the study:

1. does Educated Edo English Speakers reduce vowels appropriately or not in English words whose syllable(s)/vowels require reduction as a consequence of additional suffixes?
2. is there any significant difference(s) in vowel reduction pattern of Educated Edo bilingual males and females?
3. to what extent does Educated Edo-English Speakers vowel duration conforms to earlier description of other NE varieties, using Rhythm Ratio acoustic measures?

## **2. Literature Review**

### *2.1 Edo Geographical and Historical Location*

Edo is an Edoid language that belongs to Eastern Kwa which is part of the putative Western Benue-Congo (NBC) group (Elugbe, 1989; Williamson and Blench, 2000; Yuka and Omeregbe, 2011). Igboanusi and Peter (2005) listed Edo among Nigeria’s important minority languages. Edo speaking people are found in the centre of a large language group in Edo state. To the North are the Igbirra, Esako and Igala people while to the edge of the coastal swamp forest in the south are their neighbours who speak Ijo and Itsekiri. Their other boundaries are with the Yorubas to the west and the Igbo to the East. Edo people are around Oredo, Aho, Usen, Igbueben, Iguobazuwa town, among others. Other neighbouring towns are Irua, Ekpoma, Auchi, Agbor, Uromi, Agenebode, and others. Neighbouring dialects spoken in Edo State include Ishan, Esako, Igara, Owan, Afenmai and several others (Agheyisi, 1986). Relatedly, Schaefer (2011) comments that there are two primary subgroups within Edo, which consists of 25 languages while Elugbe (1989), Schaefer, Egbokhare and Lewis (2011) are of the opinion that 20 or so

Edoid languages characterize Bendel, an area roughly 120 miles wide and 180 miles long stretching from the Atlantic in the South to ‘Afemai Hills’ in the north. Overleaf, is the map of Edo State, showing the major ethnic towns: However, the target population for this investigation are those who speak and acquire Edo (Bini) language as their mother tongue and Edo English speakers relate specifically to the group.



**Figure 1.** Map of Edo State

## 2.2 Vowel Reduction in Nigerian English

The phonological condition for implementing vowel reduction varies across languages and it is related to language typology (stress-timed, syllable-timed) and to language specific constraints (Roca, 1999; Ravid & Schlesinger, 2007). Several scholars have based the rhythm class of languages on syllable complexity and vowel reduction (Dasher, & Bolinger, 1982; Dauer, 1983; Alexander & Yanhong, 2010). According to these scholars, stress-timed languages are those that allow vowel reduction and syllable complexity, while syllable-timed languages permit neither. Roach (2000) observes that the most frequently occurring vowel in Standard English is the /ə/. The term vowel reduction refers to two parameters: duration and quality. Reduced vowels have been reported to have shorter duration and/or more centralized formants than non-reduced ones (Nord 1986, Van Bergen 1993, Moon and Lindblom 1994). Carr (1999:116) views vowel reduction as reduction in the length of a vowel, usually accompanied by a change in its quality. Simo-Bobda (1995:255) claims NE speakers do not reduce vowels in unstressed syllable positions and that this accounts for why words such as: *pastor*, *status*, *statement* and *tribal* are produced as *past[ɔ]r*, *stat[u]s*, *statem[ɜ]nt* and *trib[a]l* respectively. Relatedly, Jowitt (1991:75) claims that SE /ə/ which naturally occurs in unstressed syllables does not occur in many Nigerian Mother Tongues (MTs). As such, he explains that Hausa English [ə] also features even in stressed syllable positions which make it significantly different from SE /ə/. Gibbon and Gut (2001) used 10 sentences read by each speaker of Ibibio, Anyi and Ega of Nigerian English, and a British English speaker as the control to show that SE rhythm differs significantly from NE. Meanwhile, it was observed that the restricted no of participants

(one ethnic group each) are not representative enough to represent NigE rhythm. In the opinion of Akinjobi (2006), a major deviation from SBE usage for Yoruba speakers of English is in the realization of vowels and syllables which occur in unstressed positions in SE. That is, a shift in stress is not necessitated by reduction in vowel of the syllable from which stress is shifted

However, it has been observed that existing phonological investigations on vowel reduction in NE have been on the major ethnic groups (Hausa, Yoruba, Igbo) and a few minority group (Ibibio, Eka etc) but studies on Edo English vowel reduction which is also a minority group have been scarcely investigated. Gibbon and Gut (2001) proposed Rhythm Ratio (RR) as an improvement an acoustic measurement to support the traditional classification of rhythm classes. Rhythm Ratio does not calculate absolute differences in length between adjacent units unlike the PVI but computes their ratio. This model was adopted for this study because it provides a tenable statistical and acoustic result in confirming whether there is any significant variation in vowel reduction of Educated Edo English Speakers' and SE, and the implication for Nigerian English rhythm description.

### **3. Methodology and Theoretical Framework**

A Briton who lives in London served as the native baseline while 200 hundred (100 males and 100 females) Educated Edo English Speakers (university undergraduates), who speak Edo as their mother tongue were purposively sampled for this investigation. The choice of participants was based on the conviction that as university undergraduates they must have attained relative proficiency in spoken and written English. Participants were also assumed to meet variety 3 criteria of Banjo (1991). The research instrument consists of 20 English root words with suffixes. The participants were made to produce the test items into a digitalised Speech Filing System (SFS) computerised speech laboratory installed on *Hp* computer laptop. The participants' production was later played back and analysed through auditory means and converted to statistical form. Metrical grid, a tenet of metrical phonology developed by Liberman and Prince (1977) as an alternative approach to Chomsky and Halle's generative phonology was used as the theoretical framework (Cruttenden, 1986:30). Metrical grid was adopted as the theoretical framework for this investigation because of its inherent advantages. Metrical grid helps in the easy identification of prominent syllables and account for rhythmic alternation between strong and weak syllables as determined by the vowel quality and duration. Furthermore, the durational difference between strong and weak vowels was adequately tracked and cropped for analysis. Durational difference was captured and further converted to Gibbon and Gut (2001) Rhythm Ratio statistical value of 0-100 (the lesser the value to 0, the more syllable-timed and the closer the value to 100, the more stress-timed). The highest duration was adopted as the norm for Educated Edo English vowel reduction pattern. Below is Rhythm Ratio acoustic model:

$$RR = 100 \sum_{k=1}^{m-1} \frac{d_i}{d_j} / (m - 1)$$

**Figure 2.** Rhythm Ratio ( RR) ,

*Sources (Gibbon and Gut, 2001; Akinjobi & Akindele, 2016)*

**Key:**

RR = Rhythm Ratio

100 = Factor

∑ - Greek letter = Summation

d<sub>i</sub> = Duration of syllables with reduced vowels

d<sub>j</sub> = Duration of syllables with strong vowels

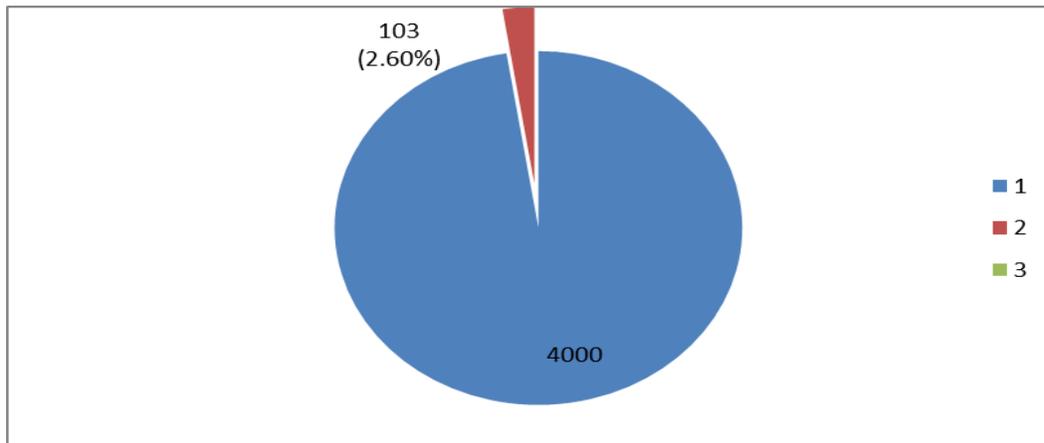
m = Maximum no of syllables in items

**Analysis  
Table 1.**

*EEES Performance in Vowel Reduction on English Stems with Suffixes*

S/N	Stems/ Stems with suffixes	Expected SE Vowel Change	Vowel Quality	Realised EEES Variants	Vowel Quality	Potential Score	Actual Score	%
1	Atom/'ætəm/ - atomic/ə'tɒmɪk	æ - ə	strong/weak	æ - æ	strong- strong	200	0	0
2	Telegraph/'teləgræf/ - telegraphic/tələl'græfɪk/	e- ə	strong/weak	e- i	strong- strong	200	0	0
3	drama/dræmə/ - dramatic/drəmətɪk/	æ-ə	strong/weak	æ - æ	strong- strong	200	13	0
4	eradicate /ɪrædɪkeɪt/ - eradication/ɪrædɪkeɪʃən	æ- æ	strong/weak	æ - æ	strong- strong	200	0	0
5	photograph /fəʊtəgrɑ:f/ - photography/fəʊtəgrəfi/	əʊ- ə	strong/weak	o- o	strong- strong	200	8	0
6	rusticate /rʌstɪkeɪt - rustication/rəstɪkeɪʃən/	ʌ- ə	strong/weak	ɔ - ɔ	strong- strong	200	0	0
7	phonetic/fənetɪk/ - phonetician/fəʊnətɪʃən/	əʊ-ə	strong/weak	o-o	strong- strong	200	0	0
8	'angel /eɪndʒəl/ - angelic/ændʒelɪk/	ei-e	strong/weak	æ/ei-æ	strong- strong	200	11	5.5
9	commerce/kɒmɜ:s/ - commercial/kəmɜ:səl/	ɔ- ə	strong/weak	ɔ- ɔ	strong- strong	200	7	3.5
10	restore /rɪstɔ:-/ restoration/restəreɪʃən/	i- e	strong/weak	i-i	strong- strong	200	12	6
11	comedy /kɒmədi/ - comedian/kəmi:diən/	ɔ- ə	strong/weak	ɔ -ɔ	strong- strong	200	0	0
12	demonstrate/demənstreɪt/demonstration/demənstreɪʃən/	e- ə	strong/weak	ɔ - ɔ	strong- strong	200	0	0
13	grammar/græmə/ - grammarian/grəmeəriən/	æ -ə	strong/weak	æ-æ	strong- strong	200	11	5.5
14	strategy/strætədʒɪ/ - strategic/strætədʒɪk/	æ- ə	strong/weak	æ-æ	strong- strong	200	11	5/5
15	infertile /ɪnfɜ:taɪl/- infertility/ɪnfətɪləti/	ɜ: - ə	strong/weak	e-e	strong- strong	200	10	5
16	Canada/kæn əd ə /- Canadian kənəɪdiən/	æ - ə	strong/weak	æ- æ	strong- strong	200	0	0
17	cleric/klerɪk/- clerical/klerɪkəl/	e- ə	strong/weak	e-e	strong- strong	200	0	0
18	geographydʒɪ'ɒgræfi/ geographical /dʒiəgrə'fɪkəl /	ɒ-æ	strong/weak	eu-eu	strong- strong	200	0	0
19	Colony/kɒləni/ - colonial/kəl əniə/	ɔ-əʊ	strong/weak	ɔ-o	strong- strong	200	10	5
20	economy/ɪkənəmɪ/- economical/ekənəmɪkəl/	ɔ-ə	strong/weak	ɔ-ɔ	strong- strong	200	10	5
	<b>TOTAL</b>					<b>4000</b>	<b>103</b>	<b>2.60%</b>

Table 1 show that EEES reduced vowels appropriately on the suffixes added to stems at one hundred and three instances of appropriate use (2.6%) out of four thousand expected instances of appropriate use. Figure. 3 below further represents EEES performance in vowel reduction on English stems with suffixes.



**Figure 3.** EEES Performance in Vowel Reduction on English Stems with Suffixes

**Table 2.**

**EEES Performance in Vowel Reduction on English Stems with Suffixes by Sex**

S/ N	Stems/ Stems with suffixes	Expected SE Vowel change	Vowel Quality	Realised EEES Variants	Vowel quality	Potential Score		Actual Score		%	
						M	F	M	F	M	F
1	atom/'ætəm/ - atomic/ə'tɒmɪk	æ - ə	strong/weak	æ - æ	strong- strong	100	100	0	0	0	0
2	telegraph/'teləgræf/ - telegraphic/tələ'græfɪk/	e- ə	strong/weak	e- i	strong- strong	100	100	0	0	0	0
3	drama/dræmə/ - dramatic/drəmə'tɪk/	æ-ə	strong/weak	æ - æ	strong- strong	100	100	7	6	3.5	3
4	eradicate /ɪrædɪkeɪt/ - eradication/ɪrædɪkeɪʃən	æ- æ	strong/weak	æ - æ	strong- strong	100	100	0	0	0	0
5	photograph /fəʊtəgrɑ:f/ - photography/fəʊtəgrəfi/	əʊ- ə	strong/weak	o- o	strong- strong	100	100	4	4	2	2
6	rusticate /rʌstɪkeɪt - rustication/rəstɪkeɪʃən/	ʌ- ə	strong/weak	ɔ - ɔ	strong- strong	100	100	0	0	0	0
7	phonetic/fənetɪk/ - phonetician/fənetɪʃən/	əʊ-ə	strong/weak	o-o	strong- strong	100	100	0	0	0	0
8	'angel/eɪndʒəl/ - angelic/ændʒelɪk/	ei-e	strong/weak	æ/ei-æ	strong- strong	100	100	5	6	2.5	3
9	commerce/kɒmə:s/ - commercial/kəmɜ:səl/	ɔ- ə	strong/weak	ɔ- ɔ	strong- strong	100	100	3	4	1.5	2
10	restore /rɪstɔ:-/ restoration/restə'reɪʃən/	i- e	strong/weak	i-i	strong- strong	100	100	6	6	3	3
11	comedy /kɒmədi/ - comedian/kəmi:diən/	ɔ- ə	strong/weak	ɔ - ɔ	strong- strong	100	100	0	0	0	0
12	demonstrate/demənstreɪt/- demonstration/demənstreɪʃən/	e- ə	strong/weak	ɔ - ɔ	strong- strong	100	100	0	0	0	0
13	grammar/græmə/ - grammarian/græmə'riən/	æ - ə	strong/weak	æ-æ	strong- strong	100	100	5	6	2.5	3
14	strategy/strætəgɪ/ - strategic/strætəgɪk/	æ- ə	strong/weak	æ-æ	strong- strong	100	100	5	6	2.5	3
15	infertile /ɪnfɜ:taɪl/- infertility/ɪnfɜ:tiləti/	ɜ: - ə	strong/weak	e-e	strong- strong	100	100	5	5	2.5	2.5
16	Canada/kæn əd ə /- Canadian kəneɪdiən/	æ - ə	strong/weak	æ- æ	strong- strong	100	100	0	0	0	0
17	cleric/klerɪk/]-clerical/klerɪkəl/	e- ə	strong/weak	e-e	strong- strong	100	100	0	0	0	0
18	geographydʒɪʊnəgræfi/ geographical /dʒɪəgræfɪkəl /	ɪ-æ	strong/weak	eu-eu	strong- strong	100	100	0	0	0	0
19	Colony/kələni/ - colonial/kəl əniəl/	ɔ-əʊ	strong/weak	ɔ-o	strong- strong	100	100	5	5	2.5	2.5
20	economy/ɪkənəmɪ/- economical/ekənəmɪkəl/	ɔ-ə	strong/weak	ɔ-ɔ	strong- strong	100	100	5	5	2.5	2.5
	<b>TOTAL</b>					<b>2000</b>	<b>2000</b>	<b>50</b>	<b>53</b>	<b>1.30</b>	<b>1.30</b>

Table 2 represents the sex performance of EEES males and females. Male participants had 50 (1.30%) appropriate use of vowel reduction while the females had 53 (1.30%) out of 2000 expected use respectively. Overleaf is EEES performance scatter by sex:

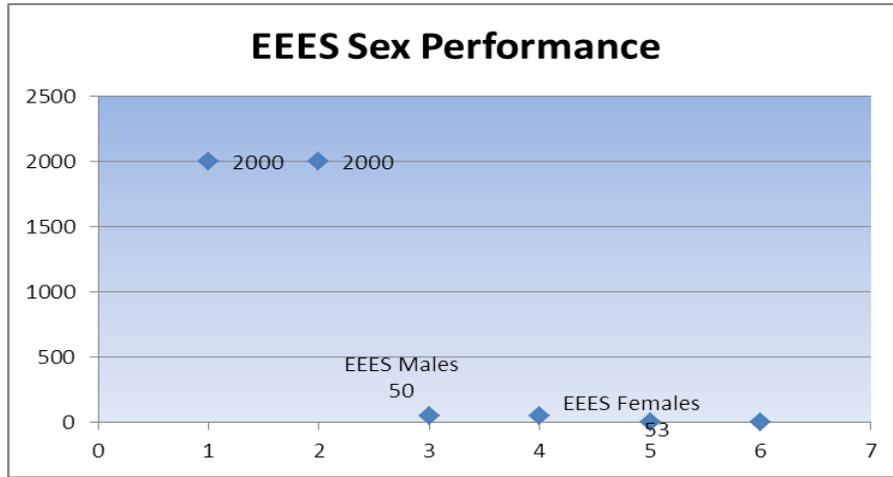


Figure 4. EEES Performance Scatter in Vowel Reduction on English Stems with Suffixes by Sex

Table 3.

Rhythm Ratio for NB and EEES vowel duration in milliseconds for telegraph/'teləgræf/-telegraphic/tələl'græfik/

telegraph/'teləgræf/ -telegraphic/tələl'græfik/				
	Strong Vowel	Reduced Vowel	Vowel Duration Difference	RR Value
<b>Native Baseline</b>	<b>182.8</b>	<b>102.3</b>	<b>80.5</b>	<b>74.1</b>
EEES 1	0.948	0.945	0.003	0.022
EEES 2	0.963	0.942	0.021	0.018
EEES 3	0.929	0.918	0.011	0.009
EEES 4	0.925	0.911	0.014	0.012
EEES 5	0.919	0.916	0.003	0.003
EEES 6	0.982	0.974	0.008	0.007
EEES 7	0.967	0.964	0.003	0.003
EEES 8	0.978	0.976	0.002	0.002
EEES 9	0.989	0.979	0.010	0.009
EEES 10	0.953	0.950	0.003	0.003
EEES 11	0.918	0.915	0.003	0.022
EEES 1 2	0.953	0.942	0.011	0.018
EEES 13	0.939	0.918	0.021	0.009
EEES 14	0.929	0.921	0.008	0.012
EEES 1 5	0.920	0.916	0.004	0.003
EEES 1 6	0.952	0.950	0.002	0.007
EEES 1 7	0.967	0.964	0.003	0.003
EEES 1 8	0.968	0.966	0.002	0.002
EEES 1 9	0.988	0.979	0.009	0.009
EEES 20	0.969	0.966	0.003	0.009
<b>Total</b>	<b>19.05</b>	<b>18.91</b>	<b>0.144</b>	<b>10.49</b>

Table 3 shows the acoustic measures of 20 sampled EEES and one NB duration of strong and reduced vowels on grammar-grammarian, measured in milliseconds. Participants' durational difference was captured and further converted to RR value. There was a significant difference between NB duration of 74.1RR tilting towards stress-timing, and EEES speakers (10.49RR) titling towards syllable-timing.

**Table 4.**

*Rhythm Ratio (RR) for EEES and NB Rhythm Ratio for NB and EEES vowel duration in milliseconds for grammar/'græmə/ - grammarian/grə'meəriən*

<b>grammar/'græmə/ - grammarian/grə'meəriən/</b>				
	<b>Strong Vowel</b>	<b>Reduced Vowel</b>	<b>Vowel Duration Difference</b>	<b>RR Value</b>
<b>Native Baseline</b>	<b>176.8</b>	<b>107.1</b>	<b>69.7</b>	<b>72.9</b>
EEES 1	0.548	0.545	0.003	0.22
EEES 2	0.546	0.542	0.004	0.29
EEES 3	0.569	0.568	0.001	0.07
EEES 4	0.545	0.541	0.004	0.29
EEES 5	0.549	0.546	0.003	0.22
EEES 6	0.552	0.539	0.013	0.96
EEES 7	0.557	0.534	0.023	1.68
EEES 8	0.565	0.548	0.017	1.25
EEES 9	0.562	0.557	0.005	0.37
EEES 10	0.550	0.546	0.004	0.29
EEES 11	0.588	0.585	0.003	0.22
EEES 12	0.566	0.562	0.004	0.29
EEES 13	0.599	0.598	0.001	0.07
EEES 14	0.555	0.549	0.006	0.44
EEES 15	0.549	0.546	0.003	0.22
EEES 16	0.542	0.539	0.003	0.22
EEES 17	0.547	0.544	0.003	0.22
EEES 18	0.515	0.508	0.007	0.52
EEES 19	0.552	0.550	0.002	0.15
EEES 20	0.551	0.549	0.002	0.15
<b>Total</b>	<b>11.11</b>	<b>11.0</b>	<b>0.111</b>	<b>7.49</b>

Table 4 shows the duration of the strong and reduced vowels of EEES and the NB in milliseconds. Participants' total duration for syllables with strong vowels was 11.11 while the reduced vowel was 11.0. Durational difference was (0.111). Rhythm Ratio total value further shows (7.49) for EEES showing insignificant difference for vowel duration and tilting towards syllable-timing. Native Baseline's duration showed significant difference for strong and reduced vowels at 72.9RR, tilting towards stress-timing.

\*As stated in Gibbon and Gut (2001) RR algorithm, to get RR value for difference in duration, add 1 to original duration, divide after addition, divide again with the no of syllables in item and multiply by 100.

**Table 5: Native baseline and Educated Edo English Speakers Metrical Grids:**

	3	4
	1 2	1 2 3
<b>Native Baseline</b>	Grammar – grammarian	
	/græmə/ - /græməriən/	

	3	3 4 5
	1 2	1 2 3
<b>EEES</b>	grammar - grammarian	
	/græmə/ - /græmeirian/	

	3	4
	1 2	1 2 3
<b>NB</b>	atom	atomic
	/ætətm/ -	/ə'tɔmik/

	3	3 4
	1 2	1 2
	atom -	atomic
<b>EEES</b>	/ætɔm/-	/ætɔmik/

	3	5
	1 2 3	1 2 3 4
<b>NB</b>	Photograph -	photography
	/fəʊtəgrəf/	/fə'tɔgræfɪ/

	3 4 5	4 5 6 7
	1 2 3	1 2 3 4
<b>EEES</b>	photograph -	photography
	/fəʊtəgrəf/	/fəʊtəgræfɪ/

Metrical grids of Native Baseline and Educated Edo English Speakers over leaf show clear distinction between EEES and NB vowel reduction. The grids of the NB show that English vowel reduction rule was observed but for EEES, all the grids of all syllables were made prominent where vowel reduction was expected. The non-distinction in EEES vowel reduction pattern has strong effect on comprehension in SE English where two strong syllables never co-occur.

#### 4. Findings and Discussions

1. Educated Edo English Speakers do not reduce vowels in English words whose syllable(s)/vowels require reduction as a consequence of additional suffixes. Statistical analysis of participants revealed an overall performance of 103 (2.60%), out of 4000 expected appropriate use. This further re- confirms the fact that vowel reduction as confirmed in other ethnic groups earlier investigated is not attested in Edo English.

2. Vowel reduction pattern of Educated Edo bilingual males and females do not show any significant difference. Educated English speakers males had 50 (1.30) appropriate use while the females had 53 appropriate use (1.30) out of 2000 instances of correct use expected respectively. For gender distinction in language use, some linguists have commented that men speeches are economical and casual than women who are considered to be more careful and explicit. This has resulted in the idea of associating women's speeches with correctness, formality and prestige but insignificant difference was noticed in this study between males and females participants duration.

3. Using Ratio Rhythm acoustic measures, Educated Edo English Speakers' vowel reduction duration further confirms earlier description of other NE varieties. The durational difference in strong and reduced vowels for NB and EEES was significant. EEES sampled revealed a difference of 10.49 RR while the NB duration measured 74.1 RR value for /'teləgræf/-telegraphic/tələl'græfik. For, /'græmə-/grə'meəriən/, EEES had 7.49RR, tilting towards syllable-timing while NB duration (72.9RR), which shows clear distinction between strong and reduced vowels, and tilting towards stress-timing rhythm. The performance of EEES further displayed the non-use of reduced vowels form as expected in SE rhythm.

#### 5. Conclusions

Statistical, acoustic and metrical results for vowel reduction in EEES and SE in this study support the predictions of Gibbon and Gut (2001). Educated Edo English Speakers' vowel reduction pattern reflects the absence of a durational distinction between strong and reduced vowels while NB's vowel reduction reveals significant distinction in durational values between strong and reduced vowels. Also, EEES results suggest that an absence of duration in vowel reduction plays a significant role in the impression of syllable-timing. This study confirms the claims of Akinjobi (2006). It confirms further the tendency for the convergent of Nigerian English to be syllable timed, since this has been confirmed by previous studies on major languages and now another minority group of Nigerian English. Educated Edo English therefore can be conveniently described as a variety of the new Englishes.

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