

## **Graphemes and Phonemes Differentiation: Challenges to Language Teachers**

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### **Abstract**

The paper undertakes a critique of verbal reasoning textbooks used in Nigeria for teaching of reading and spelling skills to pre-primary and primary schools pupils. It situates the discussion within second language teaching and learning. Verbal reasoning is a method designed to fasten the process of developing reading and spelling abilities among children. Our findings show that authors of verbal reasoning textbooks are not thorough and painstaking in their approaches to devising practical exercises for the teaching and learning of letters of the alphabet as they erroneously equate speech sounds with letter sounds. What makes it worrisome is the current confusion among primary school teachers and even students as to the actual number of English speech sounds. Speech sounds are different from letter sounds. That approach that does not differentiate between speech sounds and letters is misleading and inappropriate and should be discountenanced as the current dilemma among primary school teachers in Nigeria as to the actual sounds to adopt and the exact number of English speech sounds to teach proves. To state that English has 21 consonants and 5 vowels without specifying explicitly whether reference is to letter or speech sounds is inaccurate since the two sets of sounds are distinctly different.

**Keys Words: Graphemes, Phonemes, Letter Sounds, Consonants, Vowels.**

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### **I. INTRODUCTION**

English language has a phonetic system as well as an alphabetic system. The phonetic system relates to sounds while the alphabetic system relates to writing. The phonetic system contains speech sounds which are carefully selected and fixed and has not changed substantially over a long period of time after the Great Vowel Shift of the Norman Conquest era. The alphabetic system has a set of letter symbols used for writing the language. A clear distinction exists between the phonetic system and the writing system, the former comprises segmental phonemes and the latter alphabet, spelling rules, punctuation etc. *Oxford Advanced Learners Dictionary* gives the phonetic transcription of every word and letters of the alphabet. The alphabet is a set of graphemes while the sounds are phonemes. Every English alphabet has a pattern of pronunciation just as English phonemes do.

Language learning is a gradual process of acquisition of skills whether in first language (L1) or second language (L2) situation. In order to enhance and ease the processes of acquiring reading and writing skills, authors of Verbal Reasoning textbooks in Nigeria design a lot of practice activities in order to help children achieve this purpose. In doing this, they muddle up the systems of sounds and letters as if the two systems are the same. This is a very serious misinformation with pedagogic implications for both teachers and learners. Teaching of Jolly phonics recently introduced into English language teaching curriculum further complicates matters as it seems to erode the dividing line between English graphemes and phonemes.

### **Sounds and Letters**

Every natural language exists in the spoken form before it is written down. What is written down is an overt representation of speech on a surface by the use of graphic symbols. The graphic symbols form the alphabetic system. It is the alphabetic system contained in the orthography of English which makes writing possible. Phonetic symbols which are the different ways of representing the speech sounds of English enable speaking and reading of what is written. The dictionary of English provides the phonetic transcription of every lexical entry in it as a guide to proper pronunciation of words and appropriate articulation of sounds while the lexical entry is a key to correct spelling and writing of words. Transcription itself is that system of writing

which a linguist uses to systematically represent the speech sounds of a language (Eyisi, 2007). It is actually the transcribed version of a word that every reader verbalises. For instance, the word “read” consists of four letters of the alphabet – r, e, a, d arranged meaningfully and the phonetic transcription is [ri:d] which is what is pronounced. What is read as a sentence is a string of transcriptions because transcriptions capture the spoken sound. This is why phonetics is concerned with spoken language and alphabet with written language.

In a developed language like English which has a set of sounds for speaking and a set of letter sounds and symbols for writing, any learner of English is learning how to map the spoken form onto the written symbols. What the learner does therefore is to develop the ability to identify both the phonetic and the alphabetic systems as the symbols are distinct. English has a set of 26 letters of the alphabet used in spelling and in writing and another set of 44 discrete speech sounds used in speech. So, we spell the words but speak and read every word whether in isolation or in connected utterance using the phonetic symbols or what Williamson (1984) calls phonetic alphabet supplied by the language. Every letter has its sound just as every speech sound has its phonetic symbol and how they are articulated, thereby creating a distinction between speech sounds and letter sounds. The speech sounds are perceived in the ear, and produced in the mouth (Effiong, Ekah & Isok, 2015). This premise serves as the background for the critique of certain entries in some grammar books and certain Verbal Reasoning textbooks recommended for use in Nigerian Schools. The books are:

1. *Verbal Reasoning: Book 2 for Primary Schools* (New Edition) by Ore Olunloyo.
2. *New Approach to Verbal Reasoning Book 3* by T.A. Olayiwola, Kenneth Ugochukwu, P. I. Ways, Olusola Fadiya & B. U. Mohammed.
3. *New Approach to Verbal Reasoning Book 5* by T. A. Olayiwola, Kenneth Ugochukwu, P. I. Ways, Olusola Fadiya & B. U. Mohammed.
4. *Reading is Fun Book 2* by Christie Ade-Ajayi & Anthony Youdeowei.
5. Murthy, J. D. (2018). *Contemporary English Grammar*.

### **Verbal Reasoning**

Verbal Reasoning is a strategic skill for word learning carefully designed for preprimary and primary school pupils. In modern parlance, the entire idea is cast in what is called Jolly Phonics, a teaching-of-reading approach which makes reading a fun. Because of the importance of reading and writing to literacy, and a literate person is one who is able to read and write, verbal reasoning is one of the several approaches to developing reading ability. Most importantly, it enables learners recognise words, spell and verbalise them correctly. Verbal Reasoning books are therefore designed for fast development of learner’s ability to read English.

To understand where and how the authors have defaulted requires a study of the inventory of English alphabet and their sounds before an examination of phonetic symbols. Alphabet is a system of letters set aside for the writing of a language. Essien (1990) describes orthography as the letters of the alphabet prescribed by a language for its writing. To Babarinde (2011, p.62), “alphabet is the complete set of letters used to write a language”. Williamson (1984) notes that alphabet is contained in orthography and explains that an orthography consists of the symbols and the rules that are used in writing a language while an alphabet consists of the symbols that are used in writing sounds of language. Let us consider the inventory of English alphabet and how they are sounded as specified in English dictionaries like *Oxford Advanced Learners Dictionary of English Language (8th Edition)*.

### **Sample 1: English (Alphabet) Graphemes**

	<b>Letter</b>	<b>Sound</b>
1)	A	/e <sub>1</sub> /
2)	B	/bi:/
3)	C	/si:/
4)	D	/di:/
5)	E	/i:/
6)	F	/ef/
7)	G	/dʒi:/
8)	H	/e <sub>1</sub> tʃ/
9)	I	/aɪ/
10)	J	/dʒe <sub>1</sub> /

11)	K	/keɪ /
12)	L	/el/
13)	M	/em/
14)	N	/en /
15)	O	/əʊ/
16)	P	/pi:/
17)	Q	/kju:/
18)	R	/ɑ:(r)/
19)	S	/es/
20)	T	/ti:/
21)	U	/ju:/
22)	V	/vi:/
23)	W	/dʌblju:/
24)	X	/eks/
25)	Y	/waɪ/
26)	Z	/zed/

The letter transcription reveals that every English alphabet commonly called letter has a sound which shows its reading or the way it is produced, and they are called letter sounds. English also has a phonological system with 44 sound segments with phonetic symbols comprising twenty vowel sounds and twenty-four consonant sounds Effiong, Ekah & Isok, 2015) represented as follows:

**Sample 2: English Phonemes**

Vowels		Consonants	
1.	/i:/	1.	/p/
2.	/ɪ/	2.	/b/
3.	/e/	3.	/t/
4.	/æ/	4.	/d/
5.	/ɑ:/	5.	/k/
6.	/ɒ/	6.	/g/
7.	/ɔ:/	7.	/f/
8.	/ʊ/	8.	/v/
9.	/u:/	9.	/s/
10.	/ʌ/	10.	/z/
11.	/ɜ:/	11.	/ʃ/
12.	/ə/	12.	/ʒ/
13.	/eɪ /	13.	/tʃ /
14.	/ əʊ/	14.	/dʒ/
15.	/aɪ /	15.	/θ/
16.	/aʊ/	16.	/ð/
17.	/ɔɪ /	17.	/h/
18.	/ɪə/	18.	/m/

19.	/eə/	19.	/n/
20.	/ʊə/	20.	/ŋ/
		21.	/l/
		22.	/r/
		23.	/w/
		24.	/j/

From Samples 1 and 2, English graphemes are different from English phonemes. Sample 1 exemplifies letter sounds while Sample 2 exemplifies phonetic sounds. As observed from the inventories, English alphabet has a pattern of pronunciation just as English phonemes do. When we use the 26 (twenty-six) letters of the alphabet to write, we use the 44 (forty-four) sound phonemes to speak and read what is written. This exposition sets the background for analyses of the books.

### A Survey of Contents of the Selected Texts

In *Verbal Reasoning Book 2*, Exercises 2 and 3, p.4-8, there is an exercise tagged “Vowels”. Under this is the question “Do you know your vowels?” After this question is the statement, “Here they are: Aa, Ee, Ii, Oo, Uu.” This is then followed by the exercise, “Underline all the vowels in the following “Aa, Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz. After this is a set of questions which state as follows:

- (i) Write the vowels in small letters.
- (ii) Write the vowels in capital letters.
- (iii) How many vowels do we have?
- (iv) Circle the vowels in small letters:  
 (1) I m p o g (2) a b r t (3) r y e w x, etc. (v) Circle the vowels in capital letters:  
 (1) D E X L M (2) U B F N J (3) J K R A T

A follow up exercise to this is Exercise 3, tagged “Consonants” followed by the following questions, “Do you know your consonants?”. This is then followed by the response, “Here they are”:

Bb Cc Dd Ff Gg Hh Jj Kk Ll Mm Nn Pp Qq Rr Ss Tt Vv Ww Xx Yy Zz.

There are also class activities on consonants such as:

- (i) Write the consonants in small letters.
- (ii) Write the consonants in capital letters.
- (iii) How many consonants do we have?
- (iv) Circle the consonants in small letters.
- (v) Circle the consonants in capital letters.

For question (iii), the author gives the answer as 21 consonant sounds and 5 vowel sounds.

In *Verbal Reasoning Book 5*, Lesson 2, pp.4-5, the authors ask the following question, “Do you know that there are few words in English that have no vowel? This is then followed by examples such as: Gym, Fly, Why. A follow up exercise to this states: “Now, re-arrange the following group of consonants to form meaningful words: HWY → WHY, YFL FLY. The Source goes further to state other examples of words without vowels as: STY, MYRRH, MYTH, TRY, SKY, PRY and LYNX.

Murthy (2018) in *Contemporary English Grammar* writes boldly that the alphabet of English is divided into two classes: (1) vowels (2) consonants. The source further states that for vowels, the five letters are “a, e, I, o, u” and further adds that “they are known as vowels in English” and “we cannot write even a single word without using a vowel.” The source concludes with the statement, “the remaining 21 letters of the alphabet are known as the consonant sounds in English. He lists them as “b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, z” (p.21). However, Sample 1 on English graphemes has already shown that these letters constitute the alphabetic system of English and not the phonetic system.

## II. DISCUSSION OF FINDINGS

International Phonetics Alphabet (IPA) provides a unique set of symbols for every speech sound and their writing. Some of the symbols resemble letters but are not letters of the alphabet (Williamson, 1984, Effiong, Ekah & Isok, 2015). Phonetic Alphabet is different from letter alphabet. It is the feature of English letter alphabet to have upper case called capital letters and lower case called small letters but English segmental phonemes (vowels and consonants) do not because they are phonetic symbols and phonetic symbols are not written in upper or lower case, better still, capital and small letters (Clark, Yallop & Fletcher (2007). Vowel sounds are different from vowel letters. To ask for identification of capital and small letters of vowels and consonants without adequate designation as letter sounds is a gross misinformation which poses serious pedagogic problem to second language learners. The reason is that when these learners get to secondary and higher levels of education where they are taught segmental phonemes of English, problem arises as it is currently the case with many English learners and teachers in Nigeria who complain about the actual sounds to teach due to the confusion which arises from verbal reasoning and jolly phonics. Students also question the veracity of 20 vowel sounds as against 5 and 24 consonant sounds as against 21 they were taught in primary school. The problem is that curriculum planners and syllabus content developers do not emphasize that there is a difference between vowel sounds and vowel letters as well as consonant sounds and consonant letters by updating their knowledge on current trends in language but still stick to colonial curriculum content of the 60's. In addition, there is no one-to-one correspondence between sounds and letters in English since there is no strict correlation between spelling and pronunciation, and the relationship where it exists is irregular. It is therefore erroneous to equate the alphabet of English with English sounds system, which is synonymous with equating English alphabet with its phonetic sounds.

In *Verbal Reasoning Book 3* on page 10, Lesson 5, entitled "Remembering the Vowels and Consonants", the authors state, "Here are the Vowels Aa Ee Ii Oo Uu" and conclude with the remark, "NOTE: The number of vowels and the number of consonants should be equal to the total number of letters..." thereby equating phonemes with graphemes. When the five assumed vowels is added to the twenty-one assumed consonants, the total number is 26 (twenty-six), therefore reference is to 26 letters of the alphabet and not the 44 (forty-four) speech sounds of English. The 26 suggests that "c" and "y" are part of the segmental phonemes of English whereas they are not as Sample 2 clearly attests to this.

The mix-up in the texts is traced to the fact that some phonetic symbols of English resemble letters. However, all phonetic symbols are written inside square brackets or strokes. Note the semblance between letters and phonetic symbols in Sample 3:

**Sample 3: Letter and Phonetic Symbols**

Letter Symbol	Phonetic Symbol
P	/p/
B	/b/
T	/t/
D	/d/
K	/k/
G	/g/
F	/f/
V	/v/
S	/s/
Z	/z/
H	/h/
M	/m/
N	/n/
W	/w/
J	/j/

The letter symbols are for spelling and writing while the phonetic symbols are for speaking. A close examination of the sample shows that in spelling it is /pi:/ but /p/ in speech, /bi:/ in spelling but /b/ in speech, /ti:/ in spelling but /t/ in speech; /di:/ in spelling but /d/ in speech; /ke<sub>1</sub>/ as a letter but /k/ in speech, /dʒi:/ in spelling but /g/ in speech. Others are /ef/, /es/, /em/, /en/, /heɪtʃ/ in spelling but /f, s, m, n, h/ in speech respectively. The same applies to others like /zed/ and /z/. The spelling form is actually the letters.

Furthermore, „c“ is a grapheme and not a speech sound. This letter when used in words may be represented by two speech sounds /s/ as in cite /saɪt/ and /k/ as in cattle /kætl/. Similarly, the letter y is represented in speech by the phonetic symbol /j/ in such words as you /ju:/ and use /ju:z/. As a letter it is j /dʒeɪ/ but articulated as /dʒ/ as a phonetic sound in such words as /dʒʌdʒ/, jury /dʒu:rɪ/. What appears as the letter j in the phonetic inventory of English is the palatal semi-vowel in words like pupil /pju:pl/, use /ju:z/ and it is regarded as a consonant sound rather than a vowel sound even though it is vowel-like in articulation. Because of its close resemblance with the grapheme j, when this symbol appears in phonetic transcription of certain words, some second language users of English mistake it for its grapheme /dʒeɪ/ and articulate it as such as in /dʒeləʊ/ „yellow“ and /dʒunɪvɜ:sɪtɪ/ „university“.

In addition, English has a system of long and short vowels. This is long /i:/ and short /ɪ/, short /ɒ/ and long /ɔ:/, long /ɑ:/ and short /æ/, long /u:/ and short /ʊ/. The vowel letter „i“ may be realised as a monophthong in long /i:/ and short /ɪ/ as in fit /fɪt/ and feet /fi:t/ and a diphthong /aɪ/ as in high /haɪ/ and night /naɪt/. The vowel letter e may be realised as a monophthong /e/ in words like get, /i:/ in feet and as a diphthong /ɪə/ in deer, and /eə/ in there. The letter „a“ may be realised as /ɑ:/ in laugh and /ɔ:/ in fall and /æ/ in man. If English were to have one vowel sound for the letter u, then how would we pronounce the „u“ in cool /ku:l/ and book /bʊk/ in which the „u“ is pronounced as /u:/ and /ʊ/ respectively. Letter „o“ is not a vowel sound of English but a letter vowel. This letter is realised in ten different ways in speech as the following words show: /ʊ/ in book, /u:/ in good, /əʊ/ in go, /ʊə/ in poor, /ə/ in doctor, /ɔɪ/ in boy, /ʌ/ in love, /ɑʊ/ in cow, /ɒ/ in knock and /ɔ:/ in floor. The letters q and x occur as sequences of sounds as /-kw-/ and /kst-/ in query and example /ɪksæmpəl/ respectively, therefore they are not speech sounds.

### **Pedagogic Implications**

The analyses show that English graphemes are distinctly different from English phonemes. In teaching alphabet, teachers of English need to emphasize the point that reference is to vowel and consonant letters and that there are also vowel and consonant sounds. There is no English word without a vowel sound because it is the presence of a vowel which makes a word pronounceable even if no vowel letter is overt in the word. Interweaving of vowels and consonants is what makes it possible to pronounce a word. A and I are English words as in “I am a woman” and the underlined are articulated as /eɪ/ and /aɪ/ respectively but no English word is made of consonants alone. A combination of certain consonant letters in words like *myrrh* and *gym* without any overt vowel letter does not mean that there are no vowel sounds in them or else we will never pronounce such words. Yet these words are pronounced as /meə:/ and /dʒɪm/ respectively. Information such as these need be clearly spelled out in such textbooks for both the learners and the teachers to avoid confusion.

Some of the contents in the textbooks under scrutiny constitute learning errors and errors in contents of syllabuses which fail to make a clear distinction between vowel letters and vowel sounds, consonant letters and consonant sounds are inappropriate. The authors over-generalise the definitions of vowels and consonants without a clear distinction between the two types. The infelicity arises from misconstruing and overgeneralising the definitions of vowel and consonant sounds whereby vowels are defined as all those speech sounds which are articulated without any audible obstruction of the air flowing from the lungs and consonants as those speech sounds which are articulated with partial or complete obstruction of the air flowing from the lungs. Based on these definitions, the sources carefully select those letters with the characteristics of vowel sounds and call them vowels of English and those with the features of consonant sounds and call them consonants of English thereby equating letter sounds with phonetic sounds.

The authors’ information are also inappropriate on the grounds that speech sounds in natural languages by convention are not left open as they do but are enclosed in square brackets ([ ]) or oblique brackets (/ /) in order to distinguish between letter sound and phonetic sound since some phonetic symbols in English resemble letter graphemes. In addition, that certain letters are consonant-like and vowel-like do not automatically confer on them the status of speech sounds whereas they are features of the orthography of English. It is most likely that the authors know precisely what they refer to but have not achieved the purpose because of poor presentation of the knowledge. Unfortunately, many English language teachers in Nigeria are scared of teaching speech sounds because they are not proficient in them. Because letter sounds are direct and easy to manage they carry over the knowledge of 5 vowels and 21 consonants of letter sounds too far by equating them with which speech sounds.

### III. CONCLUSION

It is expedient to draw the attention of the authors of these books and others of their kind to the gross misrepresentation and misinformation on sounds and letters and the need to emphasize the kinds of consonants and vowels referred to in order to check the general apathy in the teaching of English speech sounds and to correct the misinformation that English has 5 vowels and 21 consonant sounds whereas it is not so.

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