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A Comparative Study of Transcription in English and Fulfulde

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Abstract

This paper attempts to study and analyse transcription in English and Fulfulde. Transcription is any system of writing used by linguists that represent the speech sounds of a language in a systematic way. The researcher uses his native intuition of Fulfulde in presenting and analysing the data of this research and the analysis was developed within the frameworks of Ladefoged, (2001) and Lodge, (2008). The outcome of this research reveals that, both languages have some common phonetic features and differ significantly in some. English and Fulfulde have the same realisation of fricatives, nasals, trills, laterals and glides. Both languages have a sequence of two symbols combined to represent a single phonetic sound, known as consonant clusters. English language has forty-six phonemes while Fulfulde has thirty-six. There are no pre-nasal and implosive sounds in English, while Fulfulde has three implosives and five pre-nasal sounds: some of the English sounds are pronounced with aspiration while there is no case of aspiration in Fulfulde.

Keywords: English, Fulfulde, Transcription, Comparative, Similarities, Differences

Introduction

The English language is an Indo-European language that is part of Germanic language family. English originated from the Anglo-Frisian dialects and was brought to Britain by Germanic invaders or settlers from North-West Germany and the Netherlands (Bukar & Hussaini, 2016). Fulfulde is a native language of the Fulbe. The language is one of the African languages and one of the most widely spoken in West Africa, with the estimated population of about 40 million, with the highest concentration in Nigeria (Modu et.al, 2016).

The International Phonetic Alphabet (IPA) contains almost all phonetic symbols of human languages, any language that is reduced to writing is likely, to have all its symbols from the (IPA). All Fulfulde and English phonemes are available on the IPA chart except the pre-nasals sounds of Fulfulde which are simple compound sounds that are combination of already existing phonemes on the IPA chart, for instance: /mb/, /nd/, and /ŋg/.

Background to the Study

Looking at the nature of English and Fulfulde sound systems, there are reasonable number of phonemic issues that are problematic to the Fulfulde speakers learning English. Therefore, there is need to study the transcription of the two languages in order to identify their peculiarities.

The aim of this paper is to compare and contrast the complexity of English and Fulfulde transcription and its implications for language learning by analysing and discussing various sounds and orthographies of the two languages so as to provide an overview of the complexities and their linguistic structure.

Transcription basically deals with the representation of speech using IPA symbols, for the purpose of accuracy in phonetic detail, phoneticians have developed system of transcription using symbols whose purpose is only to indicate on paper precisely the sounds or features of an utterance (Robins, 1964). Transcription is a process through which linguists represent the speech sounds of a language in a systematic way (Akmajian, et al. 2001). Jackson (2007), states that transcription is the representation in phonetic symbols, usually from the IPA of the pronunciation of a word or utterance. Crystal (2008) says that transcription is a method of writing down speech sounds in a systematic and consistent way, also known as 'notation or script'.

The International Phonetic Alphabet (IPA)

The International Phonetic Alphabet (IPA) is a set of arbitrary symbols that represent sounds used in all languages, to do away with the discrepancy between the written form (orthography) and the spoken (speech) of most languages. The important principle of International Phonetic Alphabet is the use of the most common form of a letter for the most common phonetic property associated with that letter (Kala & Singh, 1977). The IPA recommends that a phonetic transcription should be enclosed in square brackets "[]" while that of phonological contrasts in slashes "/" /".

Concepts of Transcription

In every aspect of study there are some considerable basic concepts that need to be acknowledged. Therefore, below are the principal concepts of transcription.

Phonetic and Phonemic Transcription

Phonetic transcription is a phoneme-by-phoneme interpretation of speech sound of a language using International Phonetic Alphabet (IPA). Phonetic transcription also displays features of some phonemes that are produced with an extra articulatory effort. Phonetic variations are denoted by enclosing the symbol in a pair of brackets, [] (Kala & Singh, 1977). Phonetic

transcription is nothing more than a means through which Phoneticians use speech sound description (Ladefoged 2001), while Phonemic transcription pools all the accepted variants of a sound and represent them by a single phoneme. In Phonemic transcription all the allophonic variations are reduced to a single phoneme without consideration of any variation caused by the phoneme's position in a word. And the phonemic representation of a sound is enclosed within slanted lines, (/ /) (Kala & Singh, 1977). In a Phonemic transcription, only the Phonemic symbols should be used, in other to comparatively gain quick and easy way of using it (Roach, 2000). Phonemic transcription is quite different from written texts, this assert that there are some contrasting Phonemes in some English consonant sounds Ladefoged, 2001).

Variation in transcription start with variation in pronunciation, in transcription there is a distinction to be made between those that represent a lot of Phonetic detail, called narrow transcription, and those with less detail, called broad transcription (Lodge, 2008). When a word is transcribed without detail of pronunciation that is predictable it is simply a Phonemic transcription, while the variants of the Phonemes that occur with details are Phonetic transcription and they are known as allophones. Consider the examples below:

1. Word	Phonemic	Phonetic
pen	/pen/	[p ^h en]
cat	/kæt/	[k ^h æt]
top	/tɒp/	[t ^h ɒp]

Methodology

To investigate the nature of transcription in English and Fulfulde, this study uses a descriptive approach. Data from a corpus of written and transcribed English and Fulfulde texts was studied to determine the similarities and differences between the transcriptions in the two languages. Native speaker intuition was used in studying and analysing the data. This involves examining different transcriptions of written texts in both languages. However, Ladefoged, (2001) and Lodge (2008) were adopted as model of analysis in this study.

Transcription in English and Fulfulde

In every living language there are phonemic inventories that are assign to it, and phonemes of every language are the properties of transcription in that language. Therefore, all languages are using IPA as the basis for transcription, and the phonemes of every language comprise of vowels and consonants. What follows is a brief discussion on English and Fulfulde transcriptions.

English Transcription

Transcription of vowels in English differ significantly with that of consonants for the fact that, accent of English differs more in vowels than they do in consonants and the views of authorities as to what constitute an appropriate description of vowel sounds vary from one author to another (Ladefoged, 2001). The main problem of English transcription is that there are more vowel sounds in the language than the vowel letters in the alphabet (Ladefoged, 2001).

The discrepancies between the written and the spoken form of a language create a gap between the orthography (written form) and its Phonetic (sound) representation. In English vowel 'o' becomes /u/ after some consonants and it remains /o/ after some, for instance a word *do* can be transcribed as /du:/ and the word *go* can be transcribed as /gəʊ/ (Kala & Singh, 1977). The vowel /ɪ/ also has different Phonetic representation depending on a given English word, it can be 'ea', 'ee', 'ei', 'ie', 'e', or 'eo'. Consider the following examples:

2. Orthography	Phonemic transcription
seat	/si:t/
feet	/fi:t/
deceive	/disi:v/
piece	/pi:s/
develop	/diveləp/
deople	/pi:pl/

The above examples provide us with the nature of non-discreteness of vowel articulation, compare to the discrete nature of consonant articulation. Consonant production always involves direct contact between the articulators, thus providing transcriber with a clear view of the nature of a particular phoneme, while in vowel production such reference is vague (Kala & Singh, 1977).

The above statement cannot dispute the fact that some consonants also show differences when it comes to Phonetic usage. Take for instance letter c, is sometime represented as [k] sound, and sometimes it is represented as [s] sound or it can be in the sequence of both [k] and [s] (Ladefoged & Johnson, 2010). Consider the following examples:

3. a. c as [k] sound,
cap /kæp/
cup /kʌp/

- b. c as [s] sound,
cellular /seljələ/
receive /rɪsi:v/
- c. c as [k] and [s] in sequence,
accent /æksent/
access /ækses/

Another symbol that sometimes differs from the corresponding letter is (g) which is used for the sound in *guy* and *guess* but the sound differs in *age* as well as in the name of letter g (Ladefoged & Johnson 2010). Consider more examples below:

- 4. a. globe /gləʊb/
b. glorious /glɔːriəs/
c. agency /eɪdʒənsɪ/
d. agenda /ədʒendə/

The letters **ng** often represents a single consonant that does not occur at the beginning of a word in English, you can hear it at the end of the word ‘rang’ (the velar nasal at the end of *rang* is represented with [ŋ]) where it contrasts with other nasals in words such as ‘ram, ran’. (Ladefoged, 2001). Another important aspect of English transcription is aspiration, it is a phonetic term referring to the audible breath which may accompany a sound’s articulation, as when certain types of plosive consonants are released. It is usually symbolised by a small raised [h] following the main symbol (Crystal, 2008). Consider the following examples:

5. Orthography Phonetic transcription

pin	[p ^h ɪn]
top	[t ^h ɒp]
cat	[k ^h æt]

Fulfulde Transcription

Transcription is a method of writing down speech sounds in a systematic and consistent way by the system called “notation” or “script”. This is the act or process of representing speech sound of human language using written symbols. Fulfulde transcription simply means rendering precise and accurate description of speech sounds of Fulfulde with a specific reference to the phonemic inventory of the Language, by the use of International Phonetic Alphabet (IPA). Transcription in this regard is used in order to smoothly write down Fulfulde phonemes irrespective of considering the letters of alphabets in the language but the speech sounds as they are professed to the audience. It is assumed that each sound of a spoken utterance will represent a given phonemic symbol, so as to sufficiently give a possible representation of such

utterance. This will enable the understanding of what we transcribe and what we don't, because it is necessary to understand the basic principle of Phonology that gives a description of the systems and patterns of sounds that occur in a language (Ladefoged, 2001).

In every Phonetic transcription there are some considerable inconsistencies between the written and spoken form of every language that creates a gap between the orthography (written form) and its Phonetic (sound) representation. Therefore, in Fulfulde vowel lengthening in orthographic form is shown with the aid of diacritic symbol [:] to signify the vowel length. Consider the examples below:

6. Phoneme	Word	Phonemic Repr.	Gloss
aa	saare	/sa:rɛ/	house
ee	yeeso	/jɛ:sɔ/	face
ii	tiinde	/tɪ:ndɛ/	forehead
oo	hoore	/hɔ:rɛ/	head
uu	suudu	/sɔ:do/	room

As can be seen in the above examples, the long vowels being the combination of two letters are regarded as single Phoneme, and the lengthening is indicated by the Phonetic symbols [a:, ɛ:, ɪ:, ɔ: and ʊ:]. Apart from vowel 'a' features of the remaining four vowels have discrepancy in their orthographic forms and Phonetic description, their Phonetic description is [ɛ, ɪ, ɔ and ʊ] which is quite different from letters 'e, i, o, and u' and it is not restricted to the long vowels alone. See also another set of examples:

7. Phoneme	Word	Phonemic Repr.	Gloss
e	ego	/ɛgɔ/	may be
i	Lebbi	/lɛbbɪ/	months
o	kofngol	/kɔfngɔl/	greeting
u	cubol	/ʃʊbɔl/	voting

Furthermore, from the significance of vowel length, other phonetic information with regard to Fulfulde vowels that need to be discussed here are that, short vowels /ɪ/ and /ʊ/ are of the same quality, but laxer than the long /ɪ:/ and /ʊ:/. So also short vowel /a/ is higher than long vowel /a:/, while short vowels /ɛ/ and /ɔ/ are more open than their long equivalents (Shehu, 2014). Consider the examples below:

8. Phoneme	Word	Phonemic Repr.	Gloss
a	haḅa	/haḅa/	to fight
aa	haaḅa	/ha:ḅa/	to be anxious X
e	sera	/sɛra/	edge
ee	seera	/sɛ:ra/	to divorce
i	yima	/jɪma/	to sing
ii	yiima	/ji:ma/	will see
o	sora	/sɔra/	to hide (something)
oo	soora	/sɔ:ra/	to sell
u	tura	/tura/	to bend (something)
uu	tuur	/tu:ra/	to pull (something)

When it comes to sound production there is no discrete nature of vowel articulation, compared to the discrete nature of consonant articulation. Consonant production always involves direct contact between the articulators, thus providing transcriber with a clear view of the nature of a particular phoneme, while in vowel production such reference is vague (Kala & Singh, 1977).

Despite the precise nature of consonant articulation with reference to the place and manner of articulation as well as state of the glottis, there is still a distinction between some of the letters of consonants and their Phonetic realisation. Take for instance the phonemes [ʃ], [dʒ], [ndʒ], [ɲ], [ʝ], and [ŋ] are ‘c, j, nj, ny, y’ and ‘ng’ in their alphabetic representation. Consider the following examples:

9. Phoneme	Word	Phonemic Repr.	Gloss
c	colli	/ʃɔlli/	births
j	Jemma	/dʒɛmma/	night
nj	njamu	/ndʒamɔ/	health
ny	nyaamo	/ɲa:mɔ/	right hand
y	yamol	/ʝamɔ/	question and
ng	ngaabu	/ŋa:ɓu/	open

Considering the above examples, you can find out that, some of the phonemes are single letters in their orthographic forms and are represented with two symbols as a single phoneme (‘c’, [ʃ] and ‘j’ [dʒ]). While, and ‘nj’ is a form of two letters referring to a single alphabet but phonetically represented with three symbols as a single phoneme [ndʒ]. It can also be observed that letters ‘ny’ and ‘y’ are represented [ɲ] and [ʝ] as their phonetic structures, and the last letter ‘ng’ in the above examples become [ŋ] depending on the environment it occurs. However, this proves that in Fulfulde letters ‘ng’ and ‘n’ have different realisations depending on their relationship with the phoneme they occur with. See the following examples:

10. Phoneme	Word	Phonemic Repr.	Gloss
ng swimming	nginam	/nginam/	
ng	ngapputu	/ŋapputu/	peel
n	aan	/a:n/	you
n	aambo	/a:mbɔ/	and you?

As exemplified above, if carefully analysed you can find out that letter ‘ng’ becomes [ŋ] in the second example while letter ‘n’ becomes [m] in the fourth example.

Finally, it can be attested here that some of the pre-nasal sounds in Fulfulde are forms of two symbols representing single phoneme. These phonemes are [mb], [nd], [ng], [nj] and [ny] and letter ‘y’ is represented with [j] phonetically. Consider the examples below:

11. Phoneme	Word	Phonemic Repr.	Gloss
mb	mbaala	/mba:la/	sheep
nd	ndunngu	/ndonngu/	rainy season
ng	ngeelooba	/ngɛ:lɔ:ba/	camel
nj	njawdi	/njawdi/	wealth
ny	nyalahol	/ɲalahol/	calf and
y	yebre	/jɛbrɛ/	part

Similarities between English and Fulfulde Transcription

The relationship between English and Fulfulde transcription is that both languages have a sequence of two phonemes combined to represent a single phonetic sound such as /t/ and /ʃ/ are combined to form [tʃ], /d/ and /ʒ/ are combined to form [dʒ] respectively. Likewise, in Fulfulde some of the pre-nasal sounds are forms of two symbols representing single phoneme. These phonemes are [mb], [nd] and [ng]. So also in both English and Fulfulde /n/ sound becomes [ŋ] this is as a result of the influence of the neighbouring sounds. Subsequently, both English and Fulfulde have the same realisation of fricatives, nasals, trills, laterals and glides.

Differences between English and Fulfulde Transcription

The differences between English and Fulfulde transcription can be viewed based on the nature of the phonemic inventory of the two languages. English Language has forty-six phonemes while Fulfulde has thirty-six. Despite the fact that vowel sounds do not have a precise place and manner of articulation in both Languages, the nature of English vowels phonemes is more

complicated than that of Fulfulde, because in English one vowel can have different realisation depending on the environment it occurs. See example 2 for the different realisations of a phoneme [ɪ] in English while in Fulfulde the discrepancy is only on the phonetic and orthographic forms (see also example 7). It is observed that there are no pre-nasal and implosive sounds in English while Fulfulde has about three implosives and five pre-nasal sounds (see examples 7, 9 and 11). It is also observed that, some of the English sounds are pronounced with aspiration as in the case of /p/, /t/ and /k/ and are transcribed as [p^h], [t^h] and [k^h] (Roach, 2009) while there is no case of aspiration in Fulfulde.

Conclusion

Transcription is a method of writing down speech sounds in a systematic and consistent way. In every living language there are phonemic inventory that are assign to it, and phonemes of every language are the properties of transcription in that language. English language has forty-six phonemes while Fulfulde has thirty-six, the International Phonetic Alphabet (IPA) is a set of arbitrary symbols that represent sounds used in all languages, to do away with the discrepancy between the written (orthography) and the spoken (speech) forms of languages.

The results of this research provide an improved perception of similarities and differences between English and Fulfulde transcription. It is important as it has provided insights into the practical transcription in the two languages. This research could also lead to an improved understanding of how linguistics research is impacted by the transcription practices of different languages.

It has been outlined in this research that, both Fulfulde and English have some common phonetic features: they have the same realisation of plosives, fricatives, nasals, trills, laterals and glides. Both languages have a sequence of two letters combined to represent a single phonetic sound, such as the combination of /t/ and /ʃ/ to form [tʃ], /d/ and /ʒ/ to form [dʒ]. The two languages also differ significantly in some sounds. There are no pre-nasal and implosive sounds in English while Fulfulde has three implosives and five pre-nasal sounds, some of the English sounds are pronounced with aspiration while there is no case of aspiration in Fulfulde.

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APPENDIX

International Phonetic Alphabets

THE INTERNATIONAL PHONETIC ALPHABET (revised to 2015)												
CONSONANTS (PULMONIC)												
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal	
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ	
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ			
Trill	ʙ			r					ʀ			
Tap or Flap		ⱱ		ɾ		ɽ						
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ	
Lateral fricative				ɬ ɮ								
Approximant		ʋ		ɹ		ɻ	j	ɰ				
Lateral approximant				l		ɭ	ʎ	ʟ				

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)												
Click	Voiced implosive	Ejectives										
ʘ Bilabial	ɓ Bilabial	ʼ Example:										
ǀ Dental	ɗ Dental/alveolar	pʼ Bilabial										
ǃ Postalveolar	ɗʼ Palatal	tʼ Dental/alveolar										
ǂ Palatoalveolar	ɡʼ Velar	kʼ Velar										
ǁ Alveolar lateral	ʄ Uvular	sʼ Alveolar fricative										

OTHER SYMBOLS

ʍ Voiceless labial-velar fricative	ɕ ʑ Alveolo-palatal fricatives
ʋ̥ Voiceless labial-velar approximant	ɻ̥ Voiceless alveolar lateral fricative
ɥ Voiceless labial-palatal approximant	ɺ Simulabial fricative
ʜ Voiceless epiglottal fricative	ʡ Affricate and double articulation can be represented by two symbols joined by a tie bar if necessary.
ʕ̤ Voiceless epiglottal fricative	
ʕ̥ Epiglottal plosive	

DIACRITICS Some diacritics may be placed above a symbol with a descender, e.g. ɲ̥

Voiced	̥	Breathy voiced	̤	Deasid	̥
Voiced	̤	Creaky voiced	̰	Aspirated	̰
Aspirated	̰	Lingualized	̠	Laminar	̠
More rounded	̠	Labialized	̡	Nasalized	̃
Less rounded	̡	Palatalized	̣	Nasal release	̣
Advanced	̣	Velarized	̤	Lateral release	̤
Retracted	̤	Pharyngealized	̥	No audible release	̥
Centralized	̥	Velarized or pharyngealized	̦		
Mid-centralized	̦	Raised	̧		
Syllabic	̨	Lowered	̩		
Non-syllabic	̩	Advanced Tongue Root	̪		
Phonetic	̪	Retracted Tongue Root	̫		

VOWELS

Where symbols appear in pairs, the one to the right represents a rounded vowel.

SUPRASEGMENTALS

- ˈ Primary stress
- ˌ Secondary stress
- ː Long
- ˑ Half-long
- ˚ Extra-short
- ˞ Minor (foot) group
- ˠ Major (notation) group
- ˡ Syllable break
- ˢ Linking (absence of a break)

TONES AND WORD ACCENTS

LEVEL

- ˥ Extra high
- ˦ High
- ˧ Mid
- ˨ Low
- ˩ Extra low
- ˪ Downstep
- ˫ Upstep

CONTOUR

- ˥˩ Rising
- ˨˩ Falling
- ˥˩˨˩ High rising Low rising
- ˥˩˨˩˨˩ High rising Low rising
- ˥˩˨˩˨˩˨˩ High rising Low rising
- ˥˩˨˩˨˩˨˩˨˩ High rising Low rising

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