Yorùbá

Journal of the Yorùbá Studies Association of Nigeria

Vol. 8 No. 4 **ISSN 1595-1324** **June 2017**

www.ysan.org

The Use of Diacritised Letters in Yorùbá Text Messaging among Mobile Phone Users in Ọ̀yọ́ East Local Government Area of Nigeria

Adéyínká Lánínhún, *Ph.D.*
and
Ọmọ́táyọ̀ Ọlákójọ
Department of Communication and Language Arts
University of Ibadan, Ibadan

Abstract

This study investigated the awareness and use of diacritics in Yorùbá text messaging. Guided by the Technology Acceptance Model (TAM) and Gardner's Socio-educational Model, the study used the questionnaire and Focus Group Discussion guide to gather data from 230 purposively selected mobile phone users in Ọ̀yọ́ East Local Government Area of Nigeria. Findings revealed that although most of the respondents were aware of the diacritic feature on their mobile phones and had a favourable disposition towards the use of Yorùbá language in text messaging, they did not perceive the usefulness of diacritics in text messaging. They considered the use of diacritised letters as laborious and unnecessary. The study therefore recommended that the use of diacritics in Yorùbá text messaging should be given adequate attention by scholars and development communication experts as the SMS could serve as a platform for the development of the Yorùbá Language.

Key words: Diacritics, Texting, Mobile Phone, Yorùbá, *SMS*

Introduction

The mobile phone is now widely used across the globe. Initially, mobile phones were used mainly for making calls. However, "text-based messaging has become another cornerstone of these devices. Mobile phones entered the era of text messaging when the short message service (SMS) emerged in GSM phones in the early 1990s" (Silfverberg, 2007: 14). Neil Papworth, a software developer, sent the world's first ever text message on 3 December, 1992. He sent the text (from his computer) to a mobile phone over the Vodafone network in the UK (neilpapworth.com). It was conceived then as a method of business communication and it was imagined not as a back-and-forth process (Zurhellen cited by Hussain, 2013).

According to Gold *et al.* (2012), global penetration of mobile phones has increased dramatically in the past decade. There are an estimated 4.4 billion mobile phone users worldwide (over sixty percent of the world's population), making mobile phones the most widely used technology in human history. Short message service (SMS), or text messaging, is one of the most popular functions of mobile phones, with an estimated 18.7 billion SMS sent each day by global SMS users (Gold et al 2012; Burke, 2016). The Nigerian Communications Commission (NCC) put the total number of GSM subscribers (active lines) in Nigeria at 154,124,602 as at December 2016.

Mobile phone text messaging (also referred to as texting or SMS) is simply a means of communication. Text messaging has been found to serve many different functions, among which are maintaining contact (Smith and Williams, 2004), reminding

outpatients of hospital appointments (Koshy, Car, and Majeed, 2008), sending development messages (Fjeldsoe, Marshall, and Miller, 2009), making contact (Williams and Gilchrist, 2011), and supporting business continuity (Abdel-qader, AL-Jaber, and AL-Hamami, 2011). Other communicative functions of text messages include chatting/sharing jokes with friends, requesting for favours, responding to requests and favours, information sharing, romance, teaching/learning purposes, conveying good wishes and prayers (Hussain, 2013: 276). In Nigeria, Olorunnisola (2009) found out that students and professionals in the cities and rural communities had a habit of sending text messages.

The accusation of supplanting attempts levelled against the exogenous media by scholars like Wilson (1987) seems to be hitting its mark. Attempts are now being made by the manufacturers of new media technology, particularly computer-mediated (CMC) ones such as mobile phones, to incorporate elements of indigenous media in terms of language in their products. For instance, many phones now contain different language choices other than the European languages. The mobile phone is one media technology which has been adapted over time to accommodate the needs of various groups, indigenous people inclusive, in terms of language as reflected in diacritics.

Unicode has over 94,000 characters and so manufacturers have taken it upon themselves to programme the selected characters from Unicode on the mobile phones sold in different regions of the world. The selection is done by the

manufacturers based on the language(s) spoken in the specific part(s) of the world where the phones are to be sold. This can be viewed as an attempt by them to meet the indigenes halfway in the process of indigenising the new media of mobile phones and making them more useful to the indigenes in telling their story. It is to be noted, however, that although the diacritised letters may be programmed on the mobile phone with indigenous people in mind, not all possible diacritised letters are represented on the phones. For instance, for a language like Yorùbá, diacritised letters with under dots which reflect open variants of vowels and post-alveolar consonants are not available on the phones.

Several studies have examined text messages from different perspectives. For instance, Tagg (2012) examined the discourse of text messaging and analysed SMS communication in the UK. Thurlow (2003) also explored the sociolinguistics of text messaging. Similarly, Elvis (2009) conducted a study on the sociolinguistics of mobile phone SMS usage in Cameroun and Nigeria while Hussain (2013) did a corpus based linguistic analysis of SMS in Pakistan. Chiluwa (2008) studied text messaging in the Christain context in Nigeria. Nweze (2013) carried out a morpho-syntactic analysis of SMS text messages in Nigeria while Taiwo (2008) investigated the linguistic forms and functions of SMS text messages in Nigeria. Previous studies have focused on the use of SMS/text messages, linguistic forms and grammatical peculiarities of text messages composed in the English language. Moreover, the available research on the use of diacritics has been focused on diacritised

letters on the computer and the challenges of developing software for specific languages which make use of diacritics. The present study however examines text messaging in the indigenous language. Specifically, it investigates the use of diacritics in Yorùbá text messaging from the texters' perspective.

The obscure nature of the diacritised letters on the mobile phone keypad can pose a great challenge to mobile phone users who wish to compose text messages in Yorùbá. Due to the mobile phone technology, the diacritised letters are hidden under the major keys. So, the texter needs to be aware of their existence before he/she can use them. Our major concerns therefore in this study are to find out if users are really aware of the diacritised letters on their mobile phones. If they are, do they know that the diacritised letters are incomplete (e.g. there are no letters with under dots useful for Yorùbá orthography on the mobile phone)? What is the attitude of mobile phone users to the use of Yorùbá and diacritised letters in text messaging? Are the diacritised letters on the phones useful for sending text messages in Yorùbá? What factors affect the use of diacritics among users of mobile phone? These are the major issues raised in this study. The study looked into these questions by using Ọ̀yọ́ East Local Government Area (LGA) indigenes as a case in point.

Research Questions

1. To what extent are the mobile phone users in Ọ̀yọ́ East LGA aware of the diacritised letters on the mobile phone?

2. What is the attitude of Ọ̀yọ́ East LGA indigenes to the use of Yorùbá language in text messaging?

3. How do mobile phone users in Ọ̀yọ́ East LGA perceive the use of diacritised letters in composing text messages in Yorùbá?

Diacritics in Yorùbá

Diacritic is a mark added to the top or bottom of a letter to indicate appropriate pronunciation or to differentiate between words that are spelled the same but have different meanings. For example, the variants of the word IGBA are: igbá (calabash), igba (two hundred), ìgbà (season), igbà (rope for climbing tree) and ìgbá (garden egg). "The first diacritic appeared in Ancient Greece and Rome and evolved and spread in subsequent European Languages" (Rennert, nd).

Yorùbá belongs to the group of languages which use the alphabetic writing system modeled after the Latin alphabet (Ìlọ̀rí, 2016). Some languages that have adopted and adapted the Roman alphabet use diacritics to represent values not covered by the basic letters (Encyclopedia.com). The types of diacritics used in Yorùbá are the acute accent [é], the grave accent [è] and the under dot (or dot-below) [ẹ].

According to Ìlọ̀rí (2016: 305), Yorùbá is a tone language with three discrete level phonemes of pitch: High Tone [́] Mid Tone [ ] and Low Tone [̀]. These tones are phonemically and orthographically placed on vowels and syllabic nasals to differentiate lexical meanings. Examples cited are ọkọ́ (hoe); ọkọ (husband); ọkọ̀ (vehicle) and ọ̀kọ̀ (spear). Diacritics make messages clearer. In Yorùbá, the use of

diacritics provides morphological and lexical information (Asubiaro, 2015). In order to prevent ambiguity or any misunderstanding, therefore, it is important to use appropriate diacritics in Yorùbá text messages.

Despite the fact that Yorùbá is a language that depends on accents for meanings, research findings however indicate that the use of diacritical marks in Yorùbá is generally low. It was discovered that apart from text books published for use in schools, most of the printed materials in Yorùbá lack tone marks (Odejobi cited by Asahiah, Odejobi and Adagunodo, 2017). Also, most Yorùbá Bibles and print newspapers and magazines rarely mark the tones (Olumuyiwa, 2013); most digital Yorùbá publications are also unmarked or minimally marked for tones (Asahiah *et al.*, 2017). Asubiaro (2015: 77) explains that "diacritics are not always applied in many Yorùbá documents because specialised and language dependent input devices for the language are very rarely available".

Belinkov and Glass (2015) also found that diacritics in Arabic are usually restricted to specific settings such as language teaching or religious texts. They state further that "faced with a non-diacritised word, readers infer missing diacritics based on their prior knowledge and the context of the word order to resolve ambiguities" (2281).

Considering the minimal use of diacritics in written Yorùbá texts, it has become necessary to find out if this also applies to Yorùbá text messages (SMS). The present study therefore investigates the extent to which diacriticised letters on mobile phones are utilised in Yorùbá text messaging.

Diacritised Letters on the Computer and Mobile Phones

From computational linguistics comes Human Language Technology (HLT), which "involves the application of knowledge about human language in computer-based solutions" (Dale, 2008:6). The availability of diacritics on the computer for languages with orthography is one of the earlier accomplishments of HLT and so current efforts on this have to do with the development of scripts for languages which do not use either of the two more popular Latin or Roman scripts for their orthography.

The Human Language Technology has seen to it that the Latin script and other scripts as well as all three methods of addressing orthographic shortcomings (digraphs, diacritics, and additional letters) have found their way into media technologies. To this end, various softwares have been developed to cater for the spelling systems of languages on the computer. The Summer Institute of Linguistics (SIL) is notable for various softwares in the Unicode format which are useful for the orthography of many languages. Such softwares as enabled by the computer feature diacritics. Apart from the softwares, diacritics can be manually typed on the computer using the symbols menu. On the computer, letters can be manipulated to reflect all the diacritics they need to bear, but this is not the case on mobile phones.

Mobile phones have diacritised letters which are already combined with tone marks (accents). Mobile phones have numeric keypads (that is keypads which are basically intended

for use with digits). For the Roman script, many letters are mapped on one key. As such, typing on the mobile phone can be a cumbersome process because different buttons have to be pressed repeatedly before the needed letters appear. Non-diacritised letters appear before diacritised letters; hence, one has to keep pressing in order to discover a needed diacritised letter. This multitap text entry method no doubt increases the number of keystrokes and is therefore quite slow.

The diacritised letters on the mobile phone are fixed and cannot be manipulated. Some of the letters occur in Yorùbá while others do not. All of the vowel letters in Yorùbá bear single accent diacritical marks but not those with the double accents as found in some other languages and on the mobile phone. For instance, the letter *e* in Yorùbá can either carry a rising accent diacritic or a falling one but not both at the same time. The mobile phone has the diacritised letter *e* in the rising accent, falling accent, and the rising and falling accent. The mobile phone also has some letters with under dots and some without. Some of the diacritised letters on the mobile phone occur in Yorùbá while some do not and others occurring in Yorùbá are not available on the mobile phone. The diacritised letter *c* with an under dot is available on the mobile phone but is not useful for Yorùbá orthography. On the other hand, the diacritised letter *s* with an under dot which occurs in Yorùbá orthography is not available on the mobile phone. All of these situations combined makes minimalist diacritisation an option in text messaging. With Yorùbá being a language of entropy however, incomplete diacritisation can be useful on the mobile

phone. Diacritised letters on mobile phones thus represent one of the "compatible attributes" between the technology-based media and indigenous communication systems as posited by Asu-Kyeremeh (2005:24). Going by the scholar's argument for compatible attributes then, the mobile phone is the technology-based media while Yorùbá language is the indigenous communication system. Between the two (mobile phone as technology-based media and Yorùbá language as indigenous communication system), the diacritised letters on the mobile phone constitute a compatible attribute.

Theoretical Framework

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Davis in 1989 as an offshoot of Fishbein and Ajzen's Theory of Reasoned Action (TRA). Davis (1989) came up with the Technology Acceptance Model as a way of explaining people's attitude to and adoption of new technologies. The model consists of six constructs, namely external variables, perceived usefulness, perceived ease of use, attitude towards using, behavioural intention to use and actual system use (Erasmus, Rothmann and Van Eeden, 2015). TAM assumes that technology adoption is determined by two major variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In other words, PU and PEOU are key determinants of actual system use. They can predict an individual's attitude and intentions concerning the use of an application/system (Farahat,

2012; Durodolu, 2016). These two constructs are influenced by external variables.

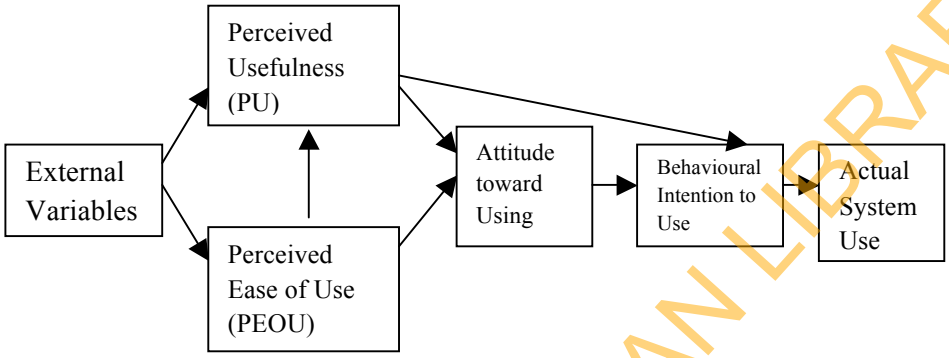

Fig. 1: Technology Acceptance Model (Source: Chen, Li and Li, 2011)

By perceived usefulness (PU), Davis refers to the anticipation that potential users have that a new technology will be beneficial to them. For mobile phone users, their perceived usefulness of the mobile phone as a medium of communication will consist in its ability to at least help them make calls and send/receive text messages. The construct of perceived ease of use (PEOU) as contained in TAM refers to the potential users' approximation of the difficulty that will be encountered in the use of a new technology. Perceived ease of use has to do with "the degree to which a person believes that using a particular information system or information technology would be free of effort" (Chen, Li and Li, 2011p.125). Hence, an indigene of Ọ̀yọ́ East LGA who is literate in Yorùbá may define the usefulness of a mobile phone not just in terms of voice calls but also in terms of appropriate letters of Yorùbá orthography for text messaging. Such an individual would have to find the

appropriate diacritised letters on the mobile phone in order for him/her to perceive the mobile phone as easy to use.

The present study investigates the level of awareness of diacritised letters on the mobile phone, as well as the indigenes' perceived usefulness and perceived ease of use of the diacritised letters. Based on TAM, awareness will then be one of the external variables that affect the indigenes' perceived usefulness (PU) and perceived ease of use (PEOU) of diacritised letters on the mobile phone. It is expected that PU and PEOU will affect the indigenes' attitude towards using the letters; this in turn will go into the indigenes' behavioural intention to use the letters and then ultimately determine their actual use of the letters. Actual use is a measure of the frequency of system use ('how often') and the volume of system use ('how much') by the user (Malhotra and Galletta cited by Erasmus et al., 2015). It is therefore assumed that frequency of use of diacritised letters would be determined by a mobile phone user's behavioural intention to use such a feature.

Gardner's Socio-educational Model

Gardner's socio-educational model is on second-language learning but it draws on attitude to language as a determining factor in this acquisition. Gardner (1988) is of the opinion that social and cultural background brings about situational anxiety and motivation/attitude which inform the formal language learning process as well as the informal language experience and, by extension, affects language attitudes and cultural values.

It is the language attitude thrust of his argument which bears on this study.

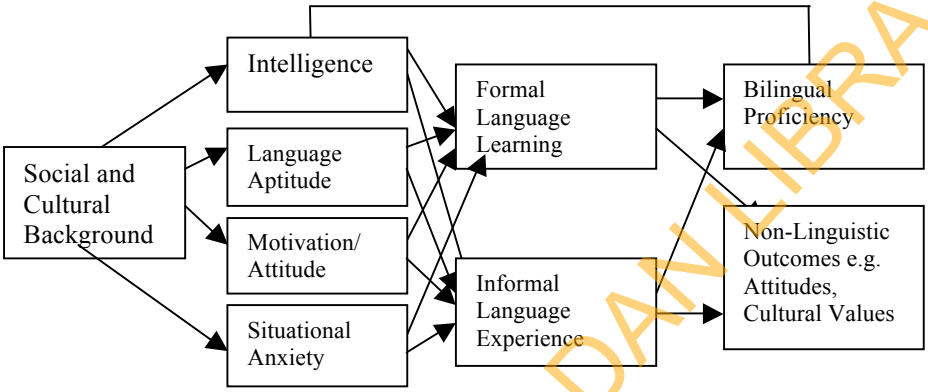

Fig. 2: Gardner's Socio-educational Model (Source: Baker, 1992)

All of the components in Gardner's model are linked and they address the different aspects of language attitude. The first entity in the model (social and cultural background) where the process of attitude development starts branches into the intelligence, language aptitude, motivation/attitude and situational anxiety entities. It is to be noted that Gardner sees attitude as stemming from the social and cultural background. What a culture therefore teaches about its language is a decisive factor in the kind of attitude held by people towards the language, especially indigenous speakers of the language. The formal and informal learning experiences, according to Gardner's model, are also involved in the process of forming language attitude. The indigenes, with Yorùbá being their mother-tongue, would have had an early, informal exposure to

the language. However, it is also likely that they were exposed to the learning of Yorùbá in a formal situation at school. This is particularly important since all the respondents are literate in Yorùbá. The present study therefore sought to find out how the indigenes differ in their attitude towards the use of Yorùbá language in text messaging. The implication of their formal language learning experience for their use of diacritised letters on the mobile phone was also explored in this study.

Situational anxiety explains the behaviourist aspect of attitude. Here situational anxiety does not denote the state of being anxious or nervous; rather it means the decision that an individual has to make concerning language choice in a situation. For such a situation to occur, an individual has to be bilingual at least, a prerequisite for the need to make a language choice. The language that an individual chooses to use in a situation or domain tells of the individual's predisposition towards the language. Going by the nature of Nigeria as a multilingual society where English is the official language, it was anticipated that some indigenes of Ọ̀yọ́ East LGA would be bilingual and so be faced with the conflict of language choice in linguistic situations, including that of text messaging. The model thus helps in exploring the language choice of indigenous people in the domain of mobile phone use as well as the factors determining and affecting such choice.

Method of Study

The study adopted the mixed-methods research approach. It employed both survey and Focus Group Discussion (FGD) methods of research to investigate the use of diacritised letters among mobile phone users in Ọ̀yọ́ East Local Government Area (LGA) of Ọ̀yọ́ State, Nigeria.

Out of the 123, 846 residents of Ọ̀yọ́ East LGA (2006 Census Figures), a total of 245 respondents were chosen for the study (210 survey respondents and 35 FGD participants). The non-probability, purposive sampling technique was employed in selecting the respondents. The four characteristics which qualified respondents for the study are: Ownership of a mobile phone; Literacy in Yorùbá; Admission by a prospective respondent to being an indigene (native) of Ọ̀yọ́ East LGA; and a habit of sending text messages.

Ọ̀yọ́ East LGA is made up of 10 wards. These are Àgbóyè/Mọ̀lété, Ajagba, Àpáàrà, Àpínni, Balógun, Jàbàtá, Òkè Apó, Olúájo, Owódé/Aráròmí and Ọ̀yọ́ East. Twenty-one questionnaire respondents were drawn from each of the wards. FGDs were conducted in five (5) purposively selected wards (Àgbóyè/Mọ̀lété, Àpáàrà, Balógun, Òkè Apó and Owódé/Aráròmí) with seven (7) respondents in each of the focus groups. Hence, there were five focus groups. To ensure standardisation, the questionnaire was translated into Yorùbá. The FGDs were also conducted in Yorùbá.

Out of the 210 copies of the questionnaire that were distributed, 199 were returned out of which 195 copies were found useful (four copies were not completed). This notwithstanding, the return rate was still quite high (94.8%).

Data were gathered from different academic and non-academic locations such as schools, colleges, local government secretariat, health centre, markets, motor parks, sawmills, neighbourhoods, and places of worship. The data gathered through the questionnaire were analysed using frequency counts and percentages while the FGD data were analysed using the explanation-building (qualitative) method.

Findings and Discussion

Demographic Characteristics of Respondents

The respondents were well represented in terms of gender: there were 85 (43.6%) males and 110 (56.4%) females. The respondents cut across different age groups, different levels of education and occupation. The age range which had the highest number of respondents was 19-25 (70; 35.9%) while secondary education had the highest frequency (85; 43.6%). There was however no respondent with a post graduate qualification. Traders, workers (civil servants/teachers/ health workers/professionals), artisans, students and farmers are represented in the study. Details are presented in Table 1:

Table 1: Demographic characteristics of respondents

Categories	Frequency	Percentage

Gender		
Male	85	43.6
Female	110	56.4
Total	**195**	**100**
Age		
13-18	20	10.3
19-25	70	35.9
26-35	51	26.2
36-50	43	22.1
50 and above	11	5.6
Total	**195**	**100**
Level of education		
Primary	17	8.7
Secondary	85	43.6
NCE	37	19.0
OND	33	16.9
HND	11	5.6
First Degree	12	6.2
Post Graduate	0	0.0
Total	**195**	**100**
Occupation		
Artisans	31	15.9
Workers	63	32.3
Traders	65	33.3
Farmers	5	2.6
Students	31	15.9
Total	**195**	**100**

Research Question 1: *To what extent are the indigenes of Òyó East LGA aware of the diacritised letters on the mobile phone?*

A potential user has to be aware of the features of a technology before perceiving whether or not the said features will be useful individually and/or collectively. This question was therefore raised to determine the extent of the indigenes' awareness of diacritised letters on their mobile phones. Most of

the survey respondents 162 (83.1%) indicated awareness; only 33 (16.9%) were not aware of these features (diacritised letters) on their mobile phones. None of the FGD participants expressed a lack of knowledge of the availability of diacritised letters on their mobile phones. They all said that they knew that their mobile phones had diacritised letters on them.

The mobile phone does not contain all the diacritised letters of the Yorùbá language. This is because some diacritised letters in the Yorùbá spelling system are not on the mobile phone. For example, the letters *e, o,* and *s* with an under dot (ẹ, ọ, ṣ) are not on the mobile phone. It was necessary to find out whether the respondents knew this and so a question was asked on whether or not the mobile phone contains all the possible diacritised letters in Yorùbá orthography.

Most of the survey respondents 125 (77.1%) indicated that their mobile phones had all the diacritised letters for Yorùbá orthography, whereas this is not the case—not all the diacritised letters in Yorùbá orthography are on the mobile phone; only 32 (19.8%) respondents were sure that their mobile phone did not contain all the diacritised letters in the Yorùbá orthography. Five (3.1%) respondents did not know if their mobile phone contained all the diacritised letters in Yorùbá orthography. However, most of the FGD participants 15 (42.9%) knew that some of the diacritised letters in the Yorùbá orthography were not on their mobile phones, 8 (22.8%) were sure that all the diacritised letters in the Yorùbá spelling system were contained on their mobile phones; the remaining twelve (34.3%) participants were not sure about the diacritised letters.

Table 2: How respondents got to know about the diacritised letters on their mobile phones

How did you get to know about the letters with diacritics?	Frequency	Percentage
By chance	75	46.3
Through a text message I received	39	24.1
Through my phone manual	30	18.5
Others	18	11.1
Total	**162**	**100**

The manner through which respondents got to know about the diacritised letters differed. There were those who learnt about the letters by chance and they were in the majority, 75 (46.3%). Some others, 39 (24.1%) got to know about the letters through text messages that they received, some 30 (18.5%) got to know about the letters through their phone manuals. The other respondents, 18 (11.1%) gave answers such as hearing about the diacritised letters from people and seeing others use the letters. Majority of the FGD participants learnt about the diacritised letters through some text messages they received, while some participants stumbled upon the letters.

Since the majority got to know by chance and through other text messages sent to them it is not surprising that they are unaware of the incompleteness of the diacritised letters. The unawareness may be due to the fact that only 30(18.5%) discovered the diacritic features through the mobile phone manual.

Nevertheless, findings show that although the majority of the mobile phone users in Ọ̀yọ́ East LGA sampled are aware

that there are diacritised letters on the mobile phone, most of them do not know that they are incomplete; not all the diacritised letters for Yorùbá orthography are on the mobile phone. Awareness is a determinant external factor in the use of the diacritised letters. It precedes use and it stands to reason that the more an individual is aware of the availability of a feature of a technology and the more he perceives the technology to be useful, the more use he will make of the technology.

In their 1997 study, Wang and Song discovered that physicians did not understand the full potentials of the Internet, as at 1997. It is the same argument put up by Gladwell (2009) about the VCR machine's lack of popularity with consumers even though they know it can do more than play VHS cassettes. The machine can also record from the television. To him, consumers are only vaguely aware of this feature of the VCR machine but they are not entirely sure of how it works. Oyo East LGA indigenes may well be in such a position too.

Research Question 2: *What is the attitude of Oyo East LGA indigenes to the use of Yorùbá language in text messaging?*

In investigating the use of the diacritised letters to reflect Yorùbá for text messaging, it was considered necessary to first determine the attitude of indigenes to the use of Yorùbá in text messaging. As contained in Gardner's socio-educational model, one of the factors determining the use of a language is the degree of proficiency in the language. Proficiency comes alongside learning and use and in both the informal home environment and the formal school environment an individual's

knowledge of a language could better improve. The knowledge of diacritics is usually acquired in school because for languages like Yorùbá which use diacritical marks in their spelling systems, the diacritical signs are one of the manifestations of the fact that the language now has a written form. The respondents were therefore asked if they learnt Yorùbá in school. Most of the respondents 179 (91.8%) learnt Yorùbá in school, 15 (7.7%) of them did not learn Yorùbá in school, and one respondent had no response to the question. It is assumed that while learning Yorùbá as a subject in school, respondents must have been exposed to the use of diacritical marks in the language. Respondents were also asked to rate their proficiency in Yorùbá.

Most of the respondents 112 (57.4%) were confident that they were excellent speakers of Yorùbá. Seventy-five (38.5%) claimed they speak Yorùbá very well while only 8(4.1%) indicated "fairly well". This result is understandable considering that the respondents are indigenes of Oyo East LGA, a Yorùbá location and Yorùbá language is their mother tongue. Most of the participants in the FGDs also regarded themselves as excellent speakers of Yorùbá. After learning Yorùbá informally and naturally at home and also formally at school, many of the respondents can be said to be competent enough to both read and write Yorùbá in the context of text messaging.

Also, because Nigeria is a multilingual society, it was envisaged that the respondents may speak other languages than

Yorùbá; therefore this issue was also addressed. Table 3 gives the details of the other language(s) spoken by the respondents.

Table 3: The other languages apart from Yorùbá spoken by respondents

Which other language do you speak apart from Yorùbá?	**Frequency**	**Percentage**
English	156	80.0
English and French	6	3.1
Hausa	4	2.1
Igbo	2	1.0
No other language	27	13.8
Total	**195**	**100**

The majority of the respondents 156 (80%) spoke English in addition to Yorùbá; only 27 (13.8%) of the respondents spoke no other language apart from Yorùbá. This is to be expected, given the fact that English is the official language (lingua franca) in Nigeria. With this situation of bilingualism, it is necessary to determine the language that the respondents prefer to use when sending text messages. Table 4 presents the data for this.

Table 4: Respondents' language preference in text messaging

In which of the languages do you prefer to send text messages?	**Frequency**	**Percentage**
English	80	47.6
Yorùbá	74	44.0
English and Yorùbá	11	6.6
Igbo	3	1.8
Total	**168**	**100**

All the respondents who spoke other languages apart from Yorùbá numbered 168 (86.1%), out of the total number of respondents. Of these 168 respondents, the majority, 80 (47.6%) preferred using English when sending text messages. However, a considerable number 74 (44.0%) of them also preferred Yorùbá. Some 11 (6.6%) indicated their preference for both English and Yorùbá in text messaging.

Respondents further gave different reasons for their choice of language in text messaging. Most of the respondents 111 (66.1%), chose the language that they consider most convenient in text messaging. Some 37 (22.0%) prefer the language that they are most proficient in; while 16 (9.6%) choose the language they consider most appropriate for text messaging. For some other respondents 4(2.3%), they choose the language that the recipients of their messages would understand or prefer when sending text messages.

Table 5: Respondents' attitude to the use of Yorùbá language in text messaging

Statements	**Agree**	**Disagree**	**Can't say**	**Total**
Yorùbá text messages are easy to read	130(66.6%)	36(18.5%)	29(14.9%)	**195 (100.0 %)**
Yorùbá text messages are easy to write	142(72.8%)	35(17.9%)	18(9.3%)	**195 (100.0 %)**
It is good to compose text messages in Yorùbá	138(70.8%)	29(14.9%)	28(14.3%)	**195 (100.0 %)**

It is good to compose text messages in diacritised Yorùbá	97(49.7%)	38(19.5%)	60(30.8%)	**195 (100.0 %)**

The responses to the first two statements in Table 5 indicate that most of the respondents were of the opinion that Yorùbá text messages are easy to read and write. This is not unusual because literacy is two-fold: reading and writing. It therefore stands to reason that a person who finds it easy to read in a particular language also finds it easy to write in the same language. As regards the case of composing text messages in Yorùbá, 138 (70.8%) of the respondents agreed that it is good. This suggests that most of the respondents find Yorùbá text messages easy enough to read and write, and they also think it is good to compose text messages in Yorùbá. However, a considerably lesser number of people, 97 (49.7%) agreed that it is good to compose text messages in diacritised Yorùbá. In the FGDs too, many of the participants were of the opinion that Yorùbá messages are easy to read and write and also that it is good to compose text messages in Yorùbá. Only one of the FGD participants said that it is rather degrading to send text messages in Yorùbá, saying that this may make one feel inferior. When asked to expatiate on this, the participant said, "*How can I send messages in Yorùbá when my friends don't? They will just see me as a bush boy who is unsophisticated*". To him, the people (i.e. his friends) to whom he sent messages would not appreciate Yorùbá text messages from him but would

consider him "unsophisticated" if he were to send them Yorùbá messages.

Given the fact that many of the respondents are bilingual, they (the bilingual ones) may encounter "situational anxiety" each time they want to send a text message. Respondents' attitude to the Yorùbá language may be informed by their social and cultural background, intelligence, language aptitude, motivation, situational anxiety, formal language learning and also informal language experience. As one FGD participant said, *"Yorùbá language is rich and I don't think that I have been in a situation where the language has proven useless"*. The respondent made this statement passionately when discussing his choice of language for text messaging. From this, it can be said that the culture of the respondents (of which Yorùbá language is an integral part) does not bestow an inferior status on Yorùbá language.

For any learning to take place, some measure of intelligence is needed as this will aid language aptitude in any language use/learning situation. Individuals also have to be motivated to use a language when sending messages. The reasons of convenience and proficiency were given by the questionnaire respondents for their choice of any particular language for text messaging. In the FGDs, participants mentioned other things such as "aptness". Much as Olorunnisola (2009) discovered in his study in Nigeria, most of the respondents were of the opinion that text messages thrive on abbreviation and precision of information, some qualities which they did not see as present in Yorùbá language. However, an

FGD participant said that the availability of proverbs in Yorùbá (a situation which makes for brevity) is one major reason why he chooses Yorùbá when sending text messages. According to him,

> People always talk about Yorùbá being too wordy for text messaging, but I think that they just don't know any better. A rich knowledge of Yorùbá proverbs and wise sayings will help to solve this artificial problem of wordiness in the language, after all that is the whole essence of proverbs and wise saying.

The situational anxiety is resolved when a decision is finally made on the language to be used. The bilingual nature of most of the respondents is a factor in their choice of language for text messaging. Their bilingualism bestows almost the same status on English and Yorùbá languages for text messaging among the respondents. Almost as many respondents chose Yorùbá as well as English for text messaging, and the FGD participants did not indicate, through their responses, an aversion for using Yorùbá for phone transactions. It can therefore be deduced that the indigenes of Ọ̀yọ́ East LGA sampled have a positive attitude towards Yorùbá which they do not refrain from showing in the domain of text messaging.

Research Question 3: *How do mobile phone users in Ọ̀yọ́ East LGA perceive the use of diacritics in composing text messages in Yorùbá?*

An individual's attitude to a feature in a technology determines how he uses the said feature. According to the Technology Acceptance Model, attitude towards using is jointly determined

by perceived ease of use and perceived usefulness (Guritno and Siringoringo, cited by Erasmus, et al., 2015). Having deduced the respondents' attitude to the use of Yorùbá for text messaging, their attitude to the use of the diacritised letters for text messaging was therefore investigated.

Table 6: Respondents' attitude to the use of diacritised letters in text messaging

Statements	Agree	Disagree	Can't Say	Total
It is good to compose text messages in diacritised Yorùbá	97(49.7%)	38(19.5%)	60(30.8%)	**195 (100.0 %)**
The letters with diacritics contained on the mobile phone are not very useful for writing in Yorùbá	64(32.8%)	58(29.7%)	73(37.4%)	**195 (100.0 %)**
Using letters with diacritics in text messages is unnecessary	108(55.4%)	51(26.1%)	36(18.5%)	**195 (100.0 %)**
Only the well educated can use letters with diacritics on the mobile phone	100(51.3%)	78(40.0%)	17(8.7%)	**195 (100.0 %)**

A large number of the respondents 64 (32.8%) were of the opinion that the diacritised letters on the mobile phone are not very useful for writing Yorùbá text messages. Only 58

(29.7%) of the respondents believed that the diacritised letters on the mobile phone are very useful for sending text messages in Yorùbá. The remaining 73 (37.4%) could not really say whether or not the diacritised letters are very useful for text messaging in Yorùbá. In fact, 108 (55.4%) respondents which constituted the majority indicated that it is unnecessary to use the diacritised letters on the mobile phone when writing Yorùbá text messages while 51(26.1%) feel it is necessary; 36(18.5%) can't really say. It can be deduced that most of the respondents did not see the need for using diacritised letters when writing Yorùbá text messages. This is probably because respondents do not have much difficulty reading or comprehending Yorùbá text messages which have little or no diacritics. When asked how easy it is to read Yorùbá texts with little or no diacritisation, the majority of the respondents 120 (61.6%) indicated that it is quite easy to read a Yorùbá text which has little or no diacritics while 56 (28.7) stated that it is fairly easy; only 19 (9.7%) find it difficult to read Yorùbá text messages with little or no diacritisation. It is therefore understandable that many of the respondents did not think it necessary to use the diacritised letters for text messaging. This probably explains why only 45 (27.8%) use diacriticized letters in Yorùbá text messaging regularly; most of the respondents 65(40.1%) sometimes send text messages using diacriticized letters.

Findings further revealed that more females send text messages in Yorùbá using diacriticized letters more regularly than the males. The males 30(41.7%) had the highest frequency of the respondents who never composed text messages with the

diacritised letters; only 15(16.7%) females who are aware of the diacritised letters have never used it in text messaging. As van Compernolle (2009) also found out, variations in the use of diacritised letters is noticeable along gender lines. At the online dating site which he studied, van Compernolle noticed a trend whereby the females paid more attention to diacritical signs than did the males. Moreover, findings of the present study suggest that the adults in the population sampled were more positively disposed to the use of the diacritised letters than their younger counterparts. Respondents who are aged 50 and above (40%), used diacritised letters more regularly than the teenagers; only 15% of those aged between 13 and 18 used diacriticized letters regularly. This corroborates van Compernolle's (2009) study where age was found to be statistically significant in determining the use of diacritised letters among individuals. On their part, some of the adult participants in the FGDs were of the opinion that in-depth knowledge of Yorùbá is lacking among the younger generation, a situation which they saw as responsible for the difficulty that people encounter when trying to communicate in Yorùbá, beyond the context of text messaging. Also, gender and age are two of the external factors mentioned by Davis (1989) in TAM as determining individuals' perceived ease of use of a technology.

Also noteworthy is the finding that all the primary school certificate holders sampled used diacritcized letters more in text messaging than the highly educated ones; they had at one time or the other used diacritised letters in sending Yorùbá text

messages. This is contrary to the opinion of the 100 (51.3%) respondents who believed that only the well educated can make use of the diacritised letters (see Table 6).

Table 7: Frequency with which respondents send Yorùbá text messages using the dacritized letters

How often do you use the letters with diacritics to send text messages written in Yorùbá?	**Frequency**	**Percentage**
Very Often	12	7.4
Often	33	20.4
Sometimes	65	40.1
Never	45	27.8
No response	7	4.3
Total	**162**	**100**

Results presented in Table 7 further revealed that despite the fact that respondents are aware of the feature on their mobile phones, some of them 45 (27.8%) indicated clearly that they have never used the diacritised letters in composing text messages in Yorùbá while 7(4.3) did not respond to the question. Various factors may be responsible for people's choice in using or not using a feature of a technology.

Of the 45 respondents who said that they have never sent text messages in diacritised Yorùbá despite being aware of the feature, 15 (33.3%) said they did not send text messages in diacritised Yorùbá because they were not interested in using the diacritised letters while 14 (31.1%) claimed they did not know how to use the letters. The respondents who said they did not use the diacritised letters for text messaging in Yorùbá because

doing so was not convenient were 11 (24.4%). Most of the FGD participants said that they did not send messages in diacritised Yorùbá because they did not think it necessary. Some others said using the diacritised letters was not very convenient as having to locate the letters on the keypad was time consuming. Another reason is that recipients may not find diacriticized messages easy to read. A participant stated that Yorùbá text messages are *usually long enough without one having to go through the bother of using diacritised letters*.

Although these data support the earlier findings of scholars about convenience and use of diacritics generally (Ibraheem, 2012), these results also point out other things, some of which may not be peculiar to Òyọ́ East indigenes. The first is that many people are simply not interested in using diacritics. Van Compernolle's (2009) study also found this out. According to him, "diacritic deletion is widespread, because the absence of an accent or diacritic may not always lead to linguistic ambiguity or a misinterpretation when the word appears in context and because it may be more convenient to produce a letter without an accent" (p. 4). In other words, diacritics are not perceived to be useful—in the language of TAM. The decision of individuals to do without diacritics may also be due to the ease with which the diacritics can be used. Many mobile phones come with numeric keypads which need to be pressed again and again before the diacritised letters are accessed. For instance, in some phones, to get the accented "e" one needs to press and hold the "e" key. If the phone has this feature, letter "e" with various diacritical marks and symbols will appear. This is not a

convenient process and it will be recalled that many respondents cited inconvenience as their reason for not using the diacritised letters. Another major discovery in this study is that mobile phone users have inadequate knowledge of the features of their phones. Peripheral knowledge of the usefulness of a technology is not good enough if the technology is to be optimally utilized.

Conclusion

In line with the Technology Acceptance Model (TAM), this study has shown that the perceived usefulness and perceived ease of use of diacrictics, a feature of mobile phone technology, has influenced the actual use of diacritics in text messaging. Although a considerable number of mobile phone users are aware of the diacritised letters on their phones, some are not aware of this feature on their phones. It is noteworthy that most of the respondents who are aware do not perceive the usefulness of these letters in text messaging. The respondents have a favourable disposition towards the use of Yorùbá in text messaging but do not consider it necessary to use diacritised letters when composing text messages in Yorùbá. They consider the use of diacritised letters as time consuming, tedious, inconvenient and unnecessary. Some do not even know how to use the letters in text messaging.

Therefore, it can be deduced that diacritics use is considered not quite important in text messaging. Nevertheless, the use of diacritics should not be totally ignored. The mobile phone (SMS) can serve as a platform for promoting indigenous languages such as Yorùbá. Hence, Telecommunication service

providers, scholars and development communication experts who disseminate development messages in Yorùbá should be encouraged to use diacritised letters in their text messages. This would create awareness on its use as well as promote the use of diacritics in text messaging. Diacritics use in text messaging will not only enhance Yorùbá language learning but also help in giving texters and recipients of SMS composed in Yorùbá an identity and sense of belonging. Findings of this study have implications for ongoing conversation on diacritic restoration in local languages (Yorùbá).

References

Abdel-qader, M., AL-Jaber, A. & AL-Hamami, A. (2011). Using short message service (SMS) to support business continuity. *World of Computer Science and Information Technology Journal (WCSIT)* 1 (2), 34-38.

Ansu-Kyeremeh K. (2005). Indigenous communication in Africa: A conceptual framework In Ansu-Kyeremeh K. (Ed.). *Indigenous communication in Africa: Concept, application and prospects* (pp. 15-25). Accra: Ghana University Press.

Asahiah, F. O., Odejobi, O.A., and Adagunodo, E.R. (2017). *Restoring tone-marks in standard Yorùbá electronic text: Improved model. Computer Science 18(3), 1-15* https://dx.doi.org/10.7494/csci2017.18.3.2128.

Asubiaro, T. (2015). *Statistical patterns of diacriticized and undiacritised Yorùbá texts. International Journal of Computational Linguistics Research 6(3) September,* 77-84.

Baker, C. (1992). *Attitudes and language.* Clevedon: Multilingual Matters Ltd.

Belinkov, Y. and Glass, J. (2015). *Arabic diacritisation with recurrent neural networks. Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing, (pp. 2281-2285), Lisbon, Portugal, 17-21 September, 2015@ Association for Computational Linguistics.*

Burke*, K. (2016). How many texts do people send every day? Retrieved from https:www.textrequest.com/blog/many-texts-people-send-per-day/*

Chen, S., Li, S. and Li, C. (2011). Recent related research in technology acceptance model: A literature review. *Australian Journal of Business and Management Research*. 1(9), 124-127 December Retrieved 12 December, 2016 from *ajbmr.com/articlepdf/AJBMR_19_04i1n9a14.pdf.*

Chiluwa, I. (2008). SMS text-messaging and the Nigerian Christian context: Constructing values and sentiments. *Journal of Language, Society and Culture* 24, 11- 20 Retrieved 12 December, 2016 from www.educ.utas.edu.au/users/tle/JOURNAL/.

Dale, R. (2008). Language technology: An overview of commercial applications and underlying technologies. Retrieved 5 June 2012 from http://www.lantech.uj_techuidenh%0/he.pdf

Durodolu, O. O. (2016). Technology acceptance model as a predictor of using information system' to acquire information literacy skills. *Library Philosophy and Practice (e-journal)*. 1450 http://digitalcommons.unl.edu/libphilprac/1450.

Egyptian universities. *Procedia - Social and Behavioral Sciences* 64, 95 – 104.

Elvis, F.W. (2009). The Sociolinguistics of mobile phone SMS usage in Cameroun and Nigeria. *The International Journal of Language, Society and Culture* 28, 25-41 Retrieved 12 December, 2016 from www.educ.utas.ed.au/users/tle/JOURNAL.

Erasmus, E., Rothmmann, S., and Van Eeden, C. (2015). A structural model of technology acceptance. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde, 41*(1), Art. #1222, 12 pages. http:// dx.doi.org/10.4102/sajip. v41i1.1222.

Farahat T. (2012). Applying the technology acceptance model to online learning in the

Fjeldsoe, B.S., Marshall, A.L., and Miller, Y.D. (2009). Behavior change interventions delivered by mobile telephone short-message service. *American Journal of Preventive Medicine* 36(2), 165-173 doi: 10.1016/j.amepre.2008.09.040.

Gardner, R.C. (1988). The Socio-educational model of second-language learning: Assumptions, findings, and issues. *Language Learning.* 38 (1), 101–126.

Gladwell, M. (2009). *What the dog saw and other adventures.* New York: Back Bay Books.

Gold, J; Andrews, H; Appleford, G; Ramanantsoa, B; Hanitriniaina, O; Deiparine, R and Corby, N. (2012). Using mobile phone text messages (SMS) to collect health service data from social franchises in Kenya, Madagascar and the Philippines. *Journal of Health Informatics in Developing Countries.* 6(2), 467-479 Retrieved 14 December 2016 www.jhidc.org

Hussain, M. N. (2013). Language of text messages: A corpus based linguistic analysis of SMS in Pakistan. Ph.D Dissertation International Islamic University, Islamabad. Retrieved from http://eprints.hec.gov.pk/id/eprint/796

Ibraheem, A.O. (2012) "A Concept paper on a new language model for automatic diacritic restoration" Retrieved 4 September, 2012 from http://ifecisrg.org/sites/default/files/articles/diacritic%20graph%20arabic20.pdf

Ilori, J.F. (2016). Yorùbá and French phonemics: Implications for foreign language teaching and learning In Ndimele, O. (Ed).

Studies in Nigerian Linguistics (pp. 297-313). Port Harcourt: Linguistic Association of Nigeria (LAN) and M & J Grand Orbit Communications Ltd.

Koshy, E., Car, J. and Majeed, A. (2008). Effectiveness of mobile-phone short message service (SMS) reminders for ophthalmology outpatient appointments: Observational study. *BMC Ophthalmology* 8(9) Retrieved 5 July, 2012 from http://www.biomedcentral.com/1471-2415/8/9/

Nigerian Communications Commission (2017). Subscriber data. Retrieved from www.ncc.gov.ng/stakeholder/statistics-reports/subsciber-data.

Nweze, I. M. (2013). SMS texting among GSM users in Nigeria: A morpho-syntatic analysis. *Research on Humanities and Social Sciences* 3(15), 84-91.

Olorunnisola, A.A. (2009). GSM telephones in Nigeria's political, socio-economic and geo-cultural landscapes In Olorunnisola, A.A. (Ed.) *Media and communications Industries in Nigeria: Impacts of neoliberal reforms between 1999 and 2007.* New York: The Edwin Mellen Press.

Olumuyiwa, T. (2013). Yorùbá writing: Standards and trends. *Journal of Arts and Humanities (JAH).* 2(1) February, 40-51 Retrieved from www.theartsjournal.org/index.php/site/article/download/50/50

Rennert (nd). A Multilingual guide to accents and diacritics in translated documents. Retrieved from www.rennert.com/translations/resources/diacritics.htm

Silfverberg, M. (2007). Historical overview of consumer text entry technologies In Mackenzie and Tana-Ishi, K. (Eds.) Text entry systems: Mobility, accessibility, universality (pp.3-26). San Francisco, CA: Morgan Kaufmann Publishers.

Smith, A. and Williams, K.D. (2004). R U There? Ostracism by cell phone text messages. *Group dynamics: Theory, research, and practice* 8 (4), 291-301.

Tagg, C. (2012). Discourse of text messaging: Analysis of SMS communication. London and New York: Continuum International Publishing Corp.

Taiwo, R. (2008). Linguistic forms and functions of SMS text messages in Nigeria. In Kelsey, S. and St. Amant, K. (Eds.). *Handbook of research on computer mediated communication* Vol.1. (pp. 969-982). Hershey PA and London: Information Science Reference (an imprint of IGI Global).

Thurlow, C. (2003). Generatn txt? The sociolinguistics of young people's text-messaging *discourse analysis online.* Retrieved 8 November, 2016 from http://extra.shu.ac.uk.daol/articles/vl/a3/thurlow2002003-paper.html.

Van Companolle (2009). Use and variation of French diacritic on an Internet dating site. *French Language Studies.* Cambridge: Cambridge University Press.

Wang, K. and Song, K. (1997). The physician and the Internet. *Mayo Clinic Procedures*. 72 (1), 66-71.

Williams, J. L. And Gilchrist, A. (2011). SMS engagement in Pakistan: A practical guide for civil society, the humanitarian sector, and government. Retrieved from www.pepl.org.uk.

Wilson, D. (1987). "Taxonomy of indigenous communication media". *Development Communication Module 2*, 23-31.