The problem of consonant clusters of Sudanese non-native speakers of English language

AMIR KHABIR SATTI HAMED
Assistant Professor
Elnaser Technical College, Omdurman
Ministry of Higher Education and Scientific Research
Republic of Sudan

Abstract
This paper aims at presenting the problem of consonant clusters for non-native speakers of English language. And Sudanese speakers of English language in the north and the south are under focus and under investigations. The researcher presents types of lexical items words which are mispronounced by Sudanese speakers of English language in the north and the south of the Sudan. This appears in Pre-initial consonant clusters. It is clear in initial and post initial and final consonant clusters.

The researcher presents two tables of English words with consonant clusters that are mispronounced by Sudanese non-native speakers of English in the north and the south of the Sudan. And now the non-native speakers of English make adaptation by inserting vowel letters.

Thus consonant clusters are real problem for the learners of English language as non-native speakers of English. These difficulties appear in pre-initial clusters, initial clusters, post initial clusters and final consonant clusters.

Key words: consonants, consonant clusters. English language. Sudanese non-native speakers. Phonetics.
INTRODUCTION:

(Language Dictionary of Language Teaching & Applied Linguistics 2010, Fourth Edition, Jack C. Richards, Richard Schimidt) stated that definition, phonetics (n) phonetic (adj.). The study of speech sounds. There are three main areas of phonetics:

1. Articulatory phonetics deals with the way in which speech sounds are produced. Sounds are usually classified according to the position of the lips and the language, how far open the mouth is, whether are not the vocal cords are vibrating, etc.

2. Acoustic phonetics deals with the transmission of speech sounds through the air. When a speech sounds is produced it causes minor air disturbances (sound waves) various instruments are used to measure the characteristics of these sound waves.

3. Auditory phonetics deals with how speech sounds are perceived by the listener.

For example, a listener may perceive:

a) differences in the aspiration. e.g. between the aspirated/p/ of {pʰit} pit and the un aspirated/p/ of {tip} tip.

b) other differences is sound quality, e.g. between the "clear"/l/ of {last} light and "dark"/l/ of {hit} hill.

(Introducing phonetics and phonology, 2012, Shahab Haider, Omer Al-Ashab, Mahmoud Ali Al-Azrag.) cleaning that, we have seen that one, two or more consonants can occur in a syllable in either of the two positions. Consonants occurring in a sequence with in a syllable are called consonant clusters as in the structure of syllable: A syllable is made of three parts. They are (a)onset or releasing, (b)clouser or arresting or coda and (c)nucleus or core. If however, there is a sequence of consonants but they occur in a sequence they do not belong to the same syllable. So they are abutting consonants.

This paper aims at presenting and investigating the problem of consonant clusters among the Sudanese people in the North of the Sudan and the Republic of South Sudan people. There are common shared mistakes among the two nations. The non-native speakers of English language in the religion of the north and south of the Sudan, find difficulties in pronouncing such lexical items with consonant clusters.
Amir Khabir Satti Hamed - The problem of consonant clusters of Sudanese non-native speakers of English language

If we take word ((which)) to some extent it is pronounced appropriately for the north of Sudan people. But for the educated people in the south of the Sudan it is difficult for them. Mainly the tribes of "Dinka", "Nuir" and "Shuluk" and "Barya", "Zandi"; they pronounce such a word as: /wij/ for which. And the word "such" as /sɔʃ/. An other example for these above mentioned tribes in southern Sudan words such as: "Negative"; It is pronounced as /nagatib/and the word "Afirmative" as /^formatib/. They also find difficulties in pronouncing the word "texts"; The people of the North and the South Sudan (extravagant) is pronounced as /ikstra/ in the articulation of words such as "Exactly", "extravagant" and the word "specific" they used to articulate them as for "Exactly"; /ex^ktily / for the majority educated people in the south and same Sudanese people in the north. Also words such as (extravagant) is pronounced as /okstra/ in the North and the South of the Sudan as common mispronunciation. The word "specific" is pronounced for the same tribes of the North of the Sudan as /sɔpɔsifik/. The same as the Dinka a tribe in the South of the Sudan. If we take the word "specially"; It is pronounced as /ispɔtʃe æ lɔtʃ/ in the North and the South of the Sudan.

The researcher is going to display and present a list of lexical items word in English language that are mispronounce by the Sudanese people in the South as well as the North of the Sudan, later on in this paper. Moreover, the researcher is going to make a comparative analysis study for such articulation. ((25/9/2019, 8:22 P.M., http:// doi.org / 10.1211 /1.4906264, stabilizing the production of non-native consonant clusters with acoustic variability, Jan.2014, Lisa Dadivson and Sean Martin)) stated that, substantial phonetic variation is observed both within and across language. Within a language, sources of variability include speaker physiology, speech context or register, speech rate, dialectal differences, sociolinguistic factors (e.g. Docherty, 2007), and speech affect (Baracroft and Sommers, 2005) among others. In the case of individual phonemes and phoneme sequences, which are the main focus of the present study, language internal phonetic variability can range from segmental changes (e.g., aspiration, glottalization, deletion) to lower-level phonetic variation, including durational shortening or lengthening, changes in amplitude, variability in the extent of phonetic voicing, and so on (Ernestus, 2012). Importantly, variation that falls within limits that are acceptable for a phoneme or sequence...
in one language can correspond to a phonological contrast in other languages. For example, voice onset time of voiceless stops in French can vary from at least 10 to 80 ms, but the same range spans two contrastive phonemes in Thai (unaspirated voiceless stops) (Kessinger and Blumstein, 1977). Thus a central problem in acquiring the sound system of a language is to determine the range of permissible variation for each linguistic unit (such as a distinctive feature, phoneme, or word). A proper understanding of phonetic variation may be especially challenging in the early stages of second language learning. It is widely accepted that adult learners native phonological and phonetic systems strongly limit their ability to acquire new sound structures (e.g., Flege, 1995; Best and Tyler, 2007).

Moreover, early L2. learners are unlikely to have sufficient orthographic, lexical, and syntactic knowledge of the new language for their interpretations of phonetic variability to be guided by appropriate higher level structure (cf. Well Known top-down effects in native language perception and production, e.g., Ganong, 1980). These considerations suggest that at least upon first exposure to novel sound structure- the interpretation of fine-grained phonetic detail could pose particular problems.

Listeners must somehow identify the same foreign category or sequence under diverse acoustic realizations (which furthermore can vary in their similarity to native structures).

Previous research, reviewed in the following, has established that adult listeners are highly sensitive to fine-grained phonetic detail in their native languages. Perhaps surprisingly, it has also been shown that acoustic variability can be beneficial for language learning by adults and children. The present study addresses the immediate effects of acoustic variation cross-language speech production. In principle, within category variation in the new language could result in highly unstable production patterns, with the nonnative speaker "over interpreting" fine distinctions among stimuli as contrastive differences. Alternatively, it could stabilize productions around phonetic aspects of a nonnative structure that are systematic rather than idiosyncratic to particular realizations. The evidence presented here demonstrates that variability can lead to both outcomes for cross-language speech production, depending on the nature of the variation itself and the made of exposure.
Objectives and Motives:
The objective and motives of this paper is to investigate the problems behind consonant cultures. The case study, which is under focus, is to highlight into Sudanese learners of English language as a foreign and second language in the North and South the Sudan. A comparative study of Sudanese educated people in the Sudan and the South of the Sudan people is under investigation.

One of the reason behind consonant clusters in the South of the Sudan people is that are some tribes in the South have their own tradition and customs that contradict with proper articulation of English language. These factors such as the Dinka tribe people used to drop and break and delete the lower jaw teeth, that may affect their pronunciation. Furthermore the impact of L1. on the target language. This takes place for the people in the North of the Sudan as well as for the people in the South of the Sudan. Another reason is that the innateness that we are born with language as human being that distinguishes us from other creature. It is genetic according to Chomsky's LAD theory ((language Acquisition device that contradicts with F.B Skinner's school of behaviorism; which is that language is acquired through imitation. That is based on F.B Skinner's experiment with mice; the morsel of food and itching powder.

However, it is in fact a real problem for nonnative speakers of English Language to bridge the gap of consonant clusters articulation. In the Sudan and South of Sudan it is thought that there are a biological factors according to Chomsky's LAD theory, the innateness that play a vital role in acquiring pronunciation correctly. Moreover, to that the influence of L1. as a mother tongue and the target language for the learners of English language in the North of the Sudan and the South of the Sudan.

This researcher puts into consideration all these factors which hinder a proper articulation of English language for nonnative speakers of the target language in the North of the Sudan as well as in the South of the Sudan. On the following stages the researcher is going to present some samples of English language lexical items: which includes consonant clusters. On which Sudanese people in the North and the South find difficulties in articulating them, the researcher is going to cast tables of words with consonant clusters that nonnative speakers of English language in the North and South.
of the Sudan are confronted with intricacies while pronounce them. This will take place in the core of the topic.

**Literature Review:-**

((25/9/2019, 8:32 P.M., http://dx.doi.org/10.1121/1.4906264, stabilizing the production of nonnative consonant clusters with acoustic variability, Jan.2014, Lisa Davidson and Sean Martin)) stated that, research in a number of areas has demonstrated that listeners are sensitive to fine grained phonetic detail and that such detail influences the representation and production of speech. Many perception studies have found processing costs associated with switching talkers supporting the claim that talker specific (indexical) properties are attended to and represented in some form by listeners (e.g., Mullennix et al.,1989; Goldinger et al.,1991; Sommers and Barcroft,2006). For example, Mullennix et al (1989) found that listeners were more accurate in identifying words presented in a single talker's voice than words produced by mulriple talkers. Similar effects have been reported on recognition performance for vowel stimuli, with higher accuracy when successive vowels are produced by the same talker (Assmann et al.,1982). Other research has shown that listeners perceptually adjust their phonetic categories to accommodated the idiosyncratic production patterns of particular speakers. For example, Kraljic and Samuel (2007) found that listeners shift their representation of/s/to include phonetic detail that was more/f/like after exposure to a speaker who produced the alveolar fricative with more palatal characteristics.

In addition to the perceptual effects, the influence of phonetic detail has been found in research on phonetic convergence (or accommodation) in speech production. A number of shadowing tasks, in which participants must quickly repeat auditorily presented stimuli, demonstrate that repetitions are more perceptually similar to the shadowed stimulus than productions of the same word without a preceding auditory prompt (e.g., Goldinger, 19989, Nye and Fowler, 2003). Similar results have been found for speakers who engage in conversational tasks, such as navigating a map (Pardo, 2006). Some studies of imitation and shadowing have isolated the specific phonetic details of the stimulus that are mimicked, such as voice onset time (e.g., Shockley et al.,2004; Nielson, 2011).
The findings reviewed above highlight the fact that phonetic variability is salient enough to influence listeners' perceptions and their subsequent productions. This suggests that phonetic variation could have a destabilizing effect on cross-language speech production. That is, nonnative listeners might be highly sensitive to fine-grained phonetic details in the input, attempt to mimic these details in their own productions, and perhaps even amplify variation by mapping diverse phonetic implementations of the same nonnative structure to categorically different native representations.

However, evidence from language learning discussed in the following section could lead to the opposite expectation: Namely, that phonetic variation should support greater stability and obstruction in nonnative perception and production.

*Beneficial effects of variability in language learning:
Across speakers, physiological, dialectal and other idiosyncratic factors lead to individual differences in format values and ratios, VOT durations, degree of vowel nasalization, and so on (e.g., Johnson and Mullennix, 1997). An important line of research has shown that the phonetic variability present in speech from multiple talkers is particularly effective in leading language learners to establish robust, phonological representations, and we focus our review on this type of variation.

In a foundational study by lively, Logan, and Pisoni (1993), Japanese speakers trained on stimuli produced by multiple talkers learned to make more accurate distinctions between English/r/ and /l/ than speakers trained on stimuli from a single talker. The former set of participants also generalized better to utterances produced by a novel talker. In addition to more robust development of phonemes in L2 acquisition (see also Logan et al., 1991; Bradlow et al., 1997; Wang et al., 1999; Iverson et al., 2005), it has been shown that acoustic variability present in multiple talker stimuli (sometimes referred to as high variability phonetic training) also leads to better L2 vocabulary learning (Barcroft and Sommers, 2005; Sommers and Barcroft, 2007, 2011). Benefits of acoustic variability have also been found in adult and infant phonotactic learning (Krehm et al., 2012; Seidi et al., 2014), child lexical development (Richardsmeier et al., 2009), and infant early word learning (Rost and McMurray, 2010).
Because the present experiment involves production of novel words, the findings of Barcroft and Sommers (2005) and Rost and McMurry (2010) are perhaps most relevant. In the Barcroft and Sommers study, simply increasing certain types of phonetic variability, while holding talker constant, did not lead to improve second language vocabulary learning by college-aged participants on measures such as latency and accuracy. However, presenting L2 learners with the same item produced by multiple talkers did improve vocabulary performance. A related pattern of results was found by Rost and McMurray in their study of early word learning by 14-month-old infants. Infants did not show evidence of recognizing single feature mismatches between novel objects and their labels (/bulk/and/puk) when trained on production from a single talker, even when the stimuli were manipulated to have considerable variation in the acoustic cues distinguishing the relevant sounds (i.e., VOT, burst amplitude, FO).

In contrast, sensitivity to object-label-mismatch was found for infants trained on productions from multiple to Kers (naturally recorded, but acoustically manipulated to match the VOT ranges in the single talker condition). This suggests that the particular sort of phonetic variation that is characteristic of speech from multiple talkers may be more informative to learners than phonetic variability found within speech from a single talker (but cf. Galle et al., 2015).
inserted in order to restore an attested phonological CV syllable structure. But these patterns are not primarily phonological CV syllable structure. But these patterns are not primarily affected by acoustic-phonetic cues or sorority-related markedness and epenthetic repair were found to be available at an early age in children. These result strengthen the hypothesis that acoustic-phonetic cues and language-specific properties, such as statical properties for example, are not solely responsible for speech perception.

What happens when speakers encounter phonological sequences that are unattested and/or ill formed in their native language. This question has been central to recent studies that have investigated the universal linguistic knowledge imposed on onset clusters in native speakers of English, Korean, Russian, and Spanish (e.g., Berent, Lennertz, June, Moreno, & Smolensky, 2008; Berent, Lennertz & Rosselli, 2012; Berent, Lennertz, Smolensky, Vakin Nusbaum, 2009, Berenr, Steroade, Lennertz, Vakin, 2007). More specifically.

These studies have attempted to examine whether-and how-the Optimality theory framework (e.g., Prince & Smolensky,1997,2004) is able to make universal grammatical constraints available to all listeners in all language and thus permits the (mis) perception of unattested, ill-formed onset clusters. The present research examine whether–and how-1. The phonological sonority–related markedness is universal, and available to native speakers of French and permit the (mis) perception of unattested onset.

Native speakers for French use a phonological repair involving on illusory epithetic vowel for unattested, ill-formed onset clusters. For several decades, research has investigated how quickly and automatically speech perception converts acoustic signals into phonological representations (e.g., Massaro, 2001). It is now well-known that speakers' perceptual systems attune to (i.e., analyze, adjust and learn) the encountered speech dynamically and at an early age even if the phonological sequences are unattested or ill-formed (e.g., Kuhl,2004; Massaro, 2001; Saffran, Werker, & Werner,2006). For instance, perceptual assimilation or compensation for coarticulation are well-known processes that turn unattested, ill-formed phonological sequences into attested, well-formed sequences in a target language (i.e.,/dla/ → /gla/; e.g., Diehl, Lotto & Hott, 2004;
The problem of consonant clusters of Sudanese non-native speakers of English language

Halle, Sequis Frauenfelder & Moreton, 2002; Pitt, 1998; Redford, 2008; Viswanathan, Magnus on & Fowler, 2010). Perceptual confusion and repair processes have been attributed to the way the perceptual system is adopted in accordance with native speakers' phonological knowledge which comprises language – specific sounds (i.e., phonemes) as well as linguistic constraints (i.e., phonotactics) that constrain the co-occurrence of phonemes and govern the well-formedness and distinctiveness of phonological sequences (i.e., phonotactic constraints – and transitional probabilities – e.g., Auer & Luce, 2005, Bailey & Hahn, 2001; 2005 Samuel, 2011). However, alternative processes have been reported in adults.

(25/9/2019, 6:32 P.M., www.ccsenet.org/ijel, Persian Learners' Syllabification of English Consonant Clusters, March. 2011., Ali Akbar Jabbari, Laila Samavarchi, Yazal University; Iran.) stated that; in this paper, Persian learners' syllabification of English word-initial and word-final consonant clusters was tested on the basis of the structural differences between their representations and different phonotatic constraints in both English and Persian. For this purpose, twelve children between the age of 4-6 were experimented on by using 53 pseudo-words designed for this particular study. These pseudo-words were formed by taking into account the English phonetic constraints. The production of the learners were recorded and transcribed. The results of this study indicate that onset clusters were mainly re-syllabified by epenthesis while the coda clusters mainly by deletion indicating transfer (negative) from Persian to English in the initial state of inter language.

English is supposed to be an international language which is learnt by speakers of different languages due to a variety of reasons. Every language has its own phonology which may be similar to languages in some respects, but at the same time be different, when words which are different in their phonological system are learnt, they may create some difficulties for the learners. Due to having different phonological rules, different language may lead to re-syllabification of words being learnt.

This re-syllabification is systematic and not random i.e., it happens in accordance with the phonological rules of the learners' first language (or languages previously learned) at least in their initial state. In other words, there is a huge possibility of transfer
from the learners' first language in the initial state of grammar (Schwartz & Sprouse, 1994).

When compared to a language like English which has complex syllable structure, Persian can be said to have a simpler syllable structure especially when it comes to the syllabification of consonant clusters. Due to different phonotactic constraints in both language with regards to consonant clusters, Persian learners' of English may re-syllabify the words in English based on phonological constraints of Persian. This process could lead into either deletion of some consonant or epenthesis of vowel sound between two consonants in a consonant cluster. To understand why the learners re-syllabify, firstly the principles governing the phonological constraints in general will be mentioned and then, the phonotactic properties of both the language will be discussed.

Many linguists have focused on the consonant cluster syllabification in different languages based on different theories. Steele (2000), working within the principles and parameters framework of universal grammar (Chomsky, 1981) has focused on the modification of the French syllables by beginner Mandarin learners of French. In this experimental study, it was conclude that beginner Mandarin learners deleted segments which could not be properly licensed and deletion of segments was based on the preservation of the constituent heads. It was also concluded that learners' syllabification did not just depend on transfer.

Steele (2001) has also worked on the English advanced learners "ultimate attainment" of French syllable structure by focusing on the liquid –obstruent, nasal- obstruent and obstruent-liquid clusters at word-final position. This study provided strong evidence in the favor of native-like attainment in L2. acquisition of syllabification with regards to both parameter setting and surface representation.

(25/9/2019, 3:18 P.M., http://newhorizons.umcs.pl, Online Adaptation of Word-initial Ukrainian CC consonant clusters by Native Speakers of English, 2019, Kateryna Laidler, Maria Curie. Sklo Dows KA University). Argue that, the phenomenon of loan word adaptation occupies a prominent position in modern phonological structure. The present paper introduces the major theories which deal with this phenomenon as well as presenting the author's experimental study of online adaptation of Ukrainian word-initial CC consonants
The problem of consonant clusters of Sudanese non-native speakers of English language

clusters illegal in English. In this paper the findings of two experiments are compared and discussed. In the first one 25 native speakers of English imitated Ukrainian words containing word-initial CC consonant clusters absent in English. In the second task a different group of 25 native English speakers were asked to write down the same words in orthographic form. The analysis has shown certain similarities as well as differences between the two sets of data. The repetition task demonstrates that the sonority profile of a cluster has a significant influence on the reproduction of a sequence. Thus, the combinations of sounds which comply with the sonority sequencing generalization pose less difficulty for English native speakers than clusters which violate this principle. The study has also revealed the number of patterns which clearly show that the structure of the CC consonant cluster influences the repair strategy chosen by the participants. Thus, vowel epenthesis is frequently employed with two voiced obstruents, and consonant deletion seems to be the prevalent repair strategy in the case of fricatives.

We are used to the fact that words borrowed from foreign languages have become an inseparable part of the language at the receiving and of the process. Some of those words are changed to comply with the patterns in the borrowing language to such an extent that it is difficult to recognize them as long, e.g., paper, pen, pain or noun in English, while others are adapted only partially and in some cases retain some of their original pronunciation or spelling, e.g., faux pas or rendezvous. The changes which the words undergo in the course of their transfer from one language to another are commonly referred to as "adaptations" and can include changes on the level of sounds, morphological structure, or meaning. In the course of adaptation foreign words are brought as close to the rules operating in the target language as possible.

If we are asked to reproduce a word of a language that is not only unknown to us, but whose sound system is different from that in our mother tongue, we will usually and up altering its sounds in a number of ways. Most likely, our version will, naturally, contain the sounds of our native language or follow its phonetic rules. For example, if we ask a native speaker of English to pronounce the Ukrainian [mtfatî], what you can often hear will be [mutfati] or [mtfatî]. These alternations are due to the fact that the English language does not have the [mtf] cluster in word-initial position, so
the listener, whether they intend to or not will obey the rules of their native language and break the "illegal" sequence by inserting a vowel. Such adaptations that take place at the moment of speech, are called online adaptations.

Let us have a look at some examples of Japanese adaptations of English words. Japanese is a syllabic language, thus its puts restrictions on the sequences of consonants, e.g., such as the requirement that two consonants do not appear next to each other, [d] and [b], in order to avoid such a sequence, a vowel is inserted between them, changing the pronunciation of the word into [gudaobai]. Other examples include E.spirit – J. [supirito], E. Christmas – J. [kurisumasu]. However, it can be claimed that in order to avoid the sequence of two consonants, another strategy might be applied, namely deletion of one of the elements within the illicit sequence. Nevertheless, Japanese exhibits a certain consistency in how foreign language words are adapted, i.e., vowel insertion is without fail preferred over elision.

One of the questions that loanword phonology is trying to answer is why certain strategies are chosen over others and more importantly, at what stage these changes are introduced. Do the Japanese actually hear the it as any other native speaker of English, but because the languages are so different they are simply unable to articulate it as [Krismas]. The question is whether adaptations are introduced as early as at the stage of perception or may be they take place only later in production or perhaps it is the combination of the two. Recent studies of loanword adaptation assume two main positions: the phonetic and phonological approximation stance.

The phonetic view on loanword adaptation puts acoustic similarity in the centre of attention. In other words, perceptual similarity determines the way L2. forms are mapped on to L1. forms. However, the researchers favouring the other approach claim that it is phonology that plays an important role in the process.

The perceptual biases of the L1. phonological system are thought to influence the faithfulness in the perception of L2. forms. According to this explanation, modifications in the form of loanwords occur because the borrowers are nonnative speakers of L2. and thus their perception of L2. forms is unreliable. The phonetic view is strongly supported by Perperkamp (2005, 350). In a series of papers in which she argues that actually all transformations are the result of
unfaithful perception of L2.: 'loanword adaptations are basically phonetic rather than phonological in nature, and originate in the process of phonetic decoding during speech perception'. Phonological features of the target language may even be unknown to the borrower, thus they do not play any role. Peperkamp & Dupoux (2003, 368) state that, "a given input sound will be mapped onto the closest available phonetic category". If this approach is assumed, the number of the target-like reproductions should be extremely rare since ill-formed structures should be altered without exception in order to fit the phonological system of the target language.

25/9/2019, 9:30 P.M., Amazon.com, the spoken English of Hong Kong: A study of co-occurring Segmental Errors, 2002, Richard Stibbard, School of Arts, University of Surrey, Guildford, UK.) stated that, there is broad agreement as to many of the segmental features of the Hong Kong accent of English: neutralization of vowels which contrast in the standard Southern British English or General American, non-release of final stops, simplification of consonant clusters and devoicing of coda consonants. However, while it is apparent that there is no reason why these features should not co-occur within single words, such co-occurrences have not been identified in previous studies, perhaps because treatments of HK pronunciation have generally used lists of words and have thus elicited typically careful pronunciation. The connected speech data used in the present study indicates that finding form word lists may not apply to more naturalistic speech. In this study, speakers produced may words with more than one segment sounding like another English phoneme, sometimes affecting all the segments of a word. Although overt signs of misunderstanding hardly a rose, this indicates merely that the lack of such overt signals is no sign of acceptability. Arguments that Hong Kong English pronunciation should be viewed as "phonological" in its own right are rejected as inappropriate, both on grounds that this interpretation is not supported by the phonetics of the data, and more conclusively on sociolinguistic grounds.

Vowels:-
Features of Hong Kong English are widely reported include a reduced pure vowel inventory compared with that of native speakers. Often the length and quality contrast between the long and short, or tens
and lax, vowel pairs which are distinctive in standard Southern British English (SSBE) and many other native accents such as General American (GA) are not realized reliably. Because Cantonese has no such distinctive pairs, these are typically neutralized such that, for example, the distinction between "beat" (/biːt/) and "bit" (/bit/) is not reliably made. The same applies to the pair/D/us./o:/ and pairs/ u/vs/u:/and the quality difference between /e/ and/ a/ as in "met" vs. "mat". There is, however, an important difference of opinion as to exactly what Hong Kong speakers do produce in cases as these. Hung (2002) believes that in these cases both are consistently pronounced alike, e.g. both 'bit' and 'beat' as [bit], and uses this claim to support his argument that Hong Kongers' realizations should be accorded phonemic state. Hung's claims of homogeneity among his subjects in the failure to produce a formant/ duration distinction between the long/ short phoneme pairs of SSBE/GA are supported by standard deviations showing inter-speaker variation and variability, but in his subsequent distinction he discounts this and averages across speakers. Chan and Li (2000), in contrast, report that their subject's realizations of these phonemes varied between the two native speaker targets, sounding like one or the other, but not necessarily the right one, or a sound intermediate between the two; the present study lends weight to Chan and Li's (2000) view of instability rather that stability. Less well agreed is how Hong Kongers produce English diphthongs. With the expectation of a curious claim that Hong Kongers make a phonemic distinction between/æI/ and/1I/ in words with SSBE and GA/ aI/, Hung (2002: 129) reports that contrast are maintained as SSBE. Chan and Li (2000), in contrast, report wide spread monophthongisation, [D] for/ I / , [e] or [a] for/ ed/, and [e] for / eI/ realized as [I]. Again this indicates instability in the Hong Kong accent rather than a stable system. The different findings may also be due in part to the different methods of data collection and analysis used.

Hung's use of word lists read aloud may have led to unusually careful and accurate pronunciation and his practice of discounting interspeaker variability may obscure individual's pronunciation problems. Luke and Richards and Bolton and Kwk used connected speech data, which may have avoided this problem and given more representative results. Chan and Li's paper is based on informal observations in the classroom of connected speech but can be criticized
for the lack of careful repeated listening to audio data and the possibility that remembered observations may be inaccurate.

Consonants:-
As Cantonese has a similar inventory of consonant contrast than English, contrasts made by native speakers of English are often lost as sounds are substitute from the Cantonese phoneme inventory: [f] for /θ/, [d] for /θ/, [w] pr [f] fpr/v/, and [s] for /ʃ/. Because word-initial [t] and [n] are often in free variation in Cantonese, as in ('you') pronounced [net], the two English sounds are often pronounced in free variation. Chan and Li report that realizations of English/r/and/w/also enter into this free variations, with word-initial/ r/ pronounced as [t] by some speakers and as [w] by others. In word-final position, dark 'l' is often replaced by [u] and /n/is often not pronounced. Making the distinction between voiced and voiceless consonants in the coda is another well-known difficulty, especially in word-final position, as the three Cantonese word-final stops, /p/,/t/, and /k/ are [p], [t] and [k], i.e., voiceless and unreleased. Often, these or a glottal-stop are substituted for both their English voice and voiceless counterparts. All other voiced consonants are also problematic: devoicing is widely reported in the previous studies.

The Core of the Topic:-
We can realize that there is difficulty for non-native speakers of English in pronouncing the following consonant clusters:-
Amir Khabir Satti Hamed - *The problem of consonant clusters of Sudanese non-native speakers of English language*

*See tables below displaying difficulties for certain words for Sudanese non-native speakers in the North and the South.

**Table (1):**

<table>
<thead>
<tr>
<th>Word</th>
<th>Sudanese in the North</th>
<th>Sudanese in the South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which</td>
<td>/witʃ/</td>
<td>/witʃz/</td>
</tr>
<tr>
<td>Such</td>
<td>/sxʃ/</td>
<td>/sxďʃ/</td>
</tr>
<tr>
<td>Negative</td>
<td>/negtʃif/</td>
<td>/negtʃid/</td>
</tr>
<tr>
<td>Affirmative</td>
<td>/ɑ̃fairmatʃif/</td>
<td>/ɑ̃fairmatʃid/</td>
</tr>
<tr>
<td>Exactly</td>
<td>/ikzaktiʃil/</td>
<td>/ikzaktiʃil/</td>
</tr>
<tr>
<td>Extravagant</td>
<td>/ikstravagant/</td>
<td>/ikstravagant/</td>
</tr>
<tr>
<td>Texts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table (2):**

<table>
<thead>
<tr>
<th>Word</th>
<th>Sudanese North</th>
<th>Sudanese South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texts</td>
<td>/tekistics/</td>
<td>/teksts/</td>
</tr>
<tr>
<td>Specific</td>
<td>/ispɒfiʃk/</td>
<td>/ispɒfiʃk/</td>
</tr>
<tr>
<td>Specially</td>
<td>/ispɒʃæli/</td>
<td>/ispɒʃæli/</td>
</tr>
<tr>
<td>Correction</td>
<td>/kərokiʃn/</td>
<td>/kərokiʃn/</td>
</tr>
<tr>
<td>Condition</td>
<td>/kɔndiʃn/</td>
<td>/kɔndiʃn/</td>
</tr>
<tr>
<td>Interesting</td>
<td>/intərestin/</td>
<td>/intərestin/</td>
</tr>
<tr>
<td>This</td>
<td>/zis/</td>
<td>/zis/</td>
</tr>
</tbody>
</table>

Thus in table 1 we can realize that in words such as ((which, such, negative, affirmative , Excatelly, Extra-vagent, texts)). The non-native speakers of English language in the north of the Sudan and in the south of Sudan, use adaption. This is done by the insertion of value letters.

Hence there are similarities and differences; in the pronunciation for the both ethnic groups. It is thought that pronunciation is genetic. That for we are born with language. And here appears the fact of innateness. The theory of Noam Chomsky which is L.A.D language Acquisition Device.

The consonant clusters hinders the ability of non-native speakers of north Sudan and south Sudan to pronounce without adaptation and insertion of Vowel letters.

The Sudanese native speakers in the north and in the south of the Sudan face a problem. This problem is presented in the difficulties of pronouncing consonant clusters. This takes place in case that it is pre-initial consonant clusters. Or if it is initial consonant clusters or whether it is final consonant clusters.
While in table 2 we have to put into consideration the following lexical items.

The Sudanese non-speakers of English language in the north and in the south find difficulties whenever they pronounce them. These words in table number 2. They are as follows:

- (texts, specific, specially, correction, condition, interesting this). As transcription of Sudanese non-speaker of English in the north and in the south, we can observe the concept of adaptation. When the non-native speakers insert vowel letters.

CONCLUSION:-

The brief of this paper is that it concerns with the problem of consonant clusters of non-native speakers of English language. This is due to the example in table 1 and table 2.

And we have to put into consideration the concept of adaptation of non-native speakers.

They use to insert vowels in all cases of clusters. If it is pre-initial or initial or post-initial.

The researcher puts such examples in table 1 and table 2 under focus. And transcription of non-native speakers of English is displayed in the two tables. Thus the concept of consonant clusters is controversial concerning the adaptation of word by inserting vowel letters.

REFERENCES:

2. Akitsugu Nogita & Yonan Fan. University of Victoria.2008. Akitsugu@uvic.ca, echofyn@gmail.com, Not vowel epentheses: Mandarin and Japanese ESL learners' production.
4. Kateryna Laider, MARIA CuRi-SkloDowsKA University ((MCS)) in LuBliN.2019, 29,.http://newhorizons.umcs.pl,
Online Adaptation of word-initial Ukrainian CC Consonant Clusters by Native speakers of English.


7. Ruhollah Kharbeiki. Islamic Azad University, Gorgan, Iran. 2015, Amazon.com, A study of consonant clusters in an EFL context.

8. Samah Yaslem Saleh Baagbah, 2019, samahyess@gmail.com, A Case Study to improve pronouncing consonant clusters. by Young Yemeni learners in Malaysia.

9. Susan Fitt, e-mail sue@cstr.ed.ac.uk, centre for speech technology Research University of Edinburgh, the pronunciation of unfamiliar Native and non-native Town names.