

**ASPECTS OF CONNECTED SPEECH: AN EXPLORATORY STUDY ON ESL
STUDENT-TEACHERS OF THE HIGHER TEACHERS TRAINING COLLEGE
MAROUA**

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ABSTRACT: *This work aims at assessing student-teachers' ability to handle features of connected speech in listening and in transcribing sentences with some instances. The sample comprised 45 participants: Twenty-seven (27) level five (including those for in-service training), and eighteen (18) level three student-teachers. The former are in their final year to obtain grade II teacher's diploma and the latter are in their final year to obtain grade I teacher's diploma. They were subjected to a text of twenty (20) pre-designed sentences with varying number of connected speech processes. The text was used for two purposes; first, it served as a passage for connected speech dictation, and second, it was used as a text for the transcription task. This served as an indirect way to gauge their abilities to understand and to teach the aspects under study. The results showed that the participants have a lot of difficulties with lexical segmentation due to the phenomena that blur the word boundaries; they skipped some words and some sentences due to the listening difficulties. In the transcription task, the participants produced less than 50% percent of the overall proposed instances of each feature of connected speech. The various group performances were far below average. The findings call for actions to ensure the readiness of English language teachers to handle authentic English in classrooms.*

KEYWORDS: connected speech, student-teachers, real-world English, listening difficulties, non-native speaker

INTRODUCTION

One of the aspects that make up the beauty and peculiarity of English phonology is the interaction between sounds in contact. Sounds at word boundaries in streams of speech share their characteristics; some are simply harmonised, some are elided, others are liaised or combined to form a new but related sound for a smoother articulation and lighter pronunciation. These aspects in speech bring about economy and harmony which in turn leads to what is known as connected speech. When we speak naturally we do not pronounce a word, stop, and then say the next word in the sentence. A fluent speech flows with a rhythm and the words bump into each other making the final sound of the preceding word interact with the initial sound of the following word. To make speech flow smoothly the way we pronounce the end and beginning of some words can change depending on the sounds at the beginning and end of these words. Underhill (1994) rightly puts it when he says; 'A word is not just the sum of its individual sounds; just as connected speech is not the sum of its individual words.' Therefore, spotting a word in a flowing speech is as challenging as spotting an individual in a crowd. These interactions between neighbouring words through their sounds at the edges are natural phenomena in natural English speech. Owing to these changes which include merging, blending, intrusion or elision, word boundaries are blurred. Deciphering the blurred boundaries

becomes a difficult task for non-native speakers as far as lexical segmentation is concerned. Because of the changes, the connected speech also known as rapid speech is used in all registers with varying degrees and remains a linguistic luxury which excludes most non-native speakers and restricted to the native speakers. Getting familiar with rapid speech can be a lifelong struggle for non-native users and even ESL/EFL teachers who grew up, studied and work in non-immersive environments. Its pronunciation may become a significant challenge to intelligibility of the native speaker's speech for non-native listeners and the intelligibility of non-native speaker's speech for a native speaker (Lovis & Alameen, 2015). This is because as Pinker (1995) opines:

In speech sound waves, one word runs into the next seamlessly; there are no little silences between spoken words the way there are white spaces between written. We simply hallucinate the word boundaries when we reach the edge of a stretch of sound that matches some entry in our mental dictionary. This becomes apparent when we listen to the speech in foreign language: it is impossible to tell where one word ends and the next begin. (Pp.159-160)

Non-native speakers expect the missing spaces or pauses between neighbouring words for an easier lexical segmentation. But to their great dismay, the citation forms with which they are used are hardly found in natural speech. When speech organs deliver the final sound of the preceding word, they prepare to articulate the initial sound of the following word making the sounds at the edge to share their inherent features or to an extent echo alike. These changes pose a lot of listening challenges to non-native speakers.

Elabdeen (2015) maintains that L2 learners of English find some words and/or sounds missing in connected speech where they expect to hear, and they try their best, often in vain to figure out where the word boundaries are in a stream of sounds. This situation can lead to frustration especially for those ESL/EFL teachers and students with some knowledge of grammar rules and sufficient vocabulary yet unable to decipher English from the lips of a native speaker (Rogerson, 2006).

Features of connected speech

The main features of connected speech include assimilation, elision, intrusion, and linking also known as liaison. Assimilation is a phenomenon whereby a sound takes the features of a neighbouring sound (Bobda & Mbangwana, 2008; Brown, 2006). There are three types of assimilations: regressive assimilation, progressive assimilations, and coalescent assimilation.

Regressive assimilation is the most common one (Elabdeen, 2015). It occurs when the initial sound of the following word impacts the articulation of the ending consonant of the preceding item. For instance, there is bilabialisation of / **d** / into / **b** / in the phrase 'Good←morning' //gʊd mɔ:nɪŋ// instead of //gʊd mɔ:nɪŋ//; 'Hard←cover' should sound //hɑ:g kʌvə// in connected speech instead of //hɑ:d kʌvə// which are the citation forms; 'Ten pies' should sound //ten paɪz// in connected speech instead of //ten paɪz// as said in isolation. 'Can buy' should sound //kəm baɪ// instead of //kæn baɪ// which are the expected forms by the non-native speakers.

Progressive assimilation occurs at the boundary of two neighbouring words when the final sound of the preceding word influences the articulation of the initial sound of the following

word. This phenomenon can be seen in ‘On→the table’ // **ɒn nəteɪbl** // instead of // **ɒn ðəteɪbl** // as in careful speech. In this sentence, /n/ shares its feature of a nasal consonant with /t/ which is a dental consonant. Consequently, ‘t’ is nasalised to give us the above result. Elsewhere, it is found within words bearing grammatical inflections such as plural makers and tense indicators, possessive markers, and third person singular marker. For plural makers it concerns the situations whereby ‘s’ sounds ‘z’ if the ending consonant is voiced, but remains ‘s’ when the ending consonant is voiceless. Examples include:

- cliff=cliffs but dog= dog→s (dogz)
- map=maps but farm=farm→s (farmz)

Regarding tense indicators, ‘ed’, which is the regular ending for regular verbs in the simple past tense, is the most involved suffix. It sounds ‘d’ after voiced final consonants and/or vowels, but sounds ‘t’ after voiceless final consonants. In case of deletion, the verbs may sound as conjugated in the simple present tense.

Examples:

Wall+ed= wall→ed (walled) //wɔld//

Clash+ed=clash→ed (clashed) //klæft//

The inflectional assimilation involving forward impacts can be summarised in the following table:

Table1: Progressive assimilation and suffixes (adapted from Kodera, 2012)

Final consonants Inflections	Voiced		voiceless	
	Plural morphemes	Bags	//bægz//	backs
Third person singular	he’s	//hi:z//	it’s	//its//
Possessive marker	John’s	//dʒɒnz//	Jack’s	//dʒæks//
Past tense	moved	//mu:vd//	walked	//wɔ:kʰ//

The third type of assimilation is coalescence. A **coalescent assimilation** occurs when two neighbouring sounds on the edges of two neighbouring words influence each other. This phonological phenomenon is bidirectional, that is, sound ‘A’ influences on the articulation of sound ‘B’ and sound ‘B’ influences on the articulation of sound ‘A’ (A↔B). Then they merge to form a sound ‘C’ which is neither of the two, but bears their respective characteristics. The phenomenon can be read in the following examples:

t+y=**tʃ** as in Not↔yet //nɒtʃet//

d+y=**dʒ** as in Could↔you //kədʒju://

d+y=**dʒ** as in Would↔you //wədʒju://

Also known as linking, **liaison** is when a sound is used to link the edges of two words through the initial and final sounds for a smoother and faster pronunciation, and phonological suitability. ‘y’ and ‘w’ are the commonly used sounds to link the beginning and ending of words to avoid contact between glides (Bobda & Mbangwana, 2008; Cele-Murcia, 2007; 2010). As a reminder, it is to avoid this same effect that ‘an’ is used instead of ‘a’ in front of nouns beginning with vowels as in the following examples: ‘an elephant’, ‘an egg’, ‘an apple’,

‘an exercise’, etc. ‘n’ is used for purely phonological purposes and plays the function of sound linkers in the above examples.

Intrusion: it is another phenomenon used for purely phonological purposes. Here, an ‘r’ is introduced to bridge the edges with vowels as the ending and beginning sounds. As in ‘media r event’ //mediərivent//. The intrusion of this ‘r’ gives a new and different phonological appearance to the two-word phrase. Lack of awareness of this phenomenon can cost some mental effort to search for items that sound as such in the personal lexicon; while the listener is still looking for ways to segment this phrase, the speaker may be pouring out other words which require deciphering and understanding.

Elision: also known as deletion, this phenomenon has to do with dropping one or more sounds at word boundaries; it helps to avoid consonant clusters, save energy and time as well. This phenomenon can be doubled by regressive assimilation, that is, after the process of deletion, the second to the last sound in the initial word becomes the final consonant and liable to undergo assimilation from the beginning consonant of the following item. Examples:

‘She pushed him’ →//ʃi: pʊʃ hm//
 ‘Hand bag’ → //hæn bæɡ// (deletion)→//hæn←bæɡ// which gives//hæmbæɡ//
 (deletion+backward assimilation).

LITERATURE REVIEW

In recent decades, research in phonology extended its scope to the suprasegmentals; this aspect of English language is as important as it is challenging in acquisition, research and consequently its teaching. The growing literature unveils the surrounding necessities, difficulties, as well the possibilities to overcome them. Olmedo (2015), sought to assess the assimilation of features of connected speech among Spanish learners of English as a second language. To achieve his aim, he tape recorded the reading of some pre-designed sentences by some 20 students from three different Spanish universities. His inquiries led him to the discovery that a low percentage of the productions of the proposed instances of features of connected speech were produced by the participants. Besides, the Native American student who was used as a model did not produce 100% of the proposed instances of the features. This maintains the belief that even native speakers have their own limits in terms of producing the features of connected speech.

Blazquez (2015) explored the advantages of exposing ESL learners to segments of authentic videos in acquiring the features of connected speech. His results revealed that the couples of viewing activities enhanced the participants’ listening skills and gave them some degree of autonomy in both perception and understanding of native speakers’ fast speech. He argues that exposing ESL/EFL learners to authentic video clips containing the target phonological aspects is beneficial to them; it can first assess the degree of their difficulties and give the abilities to segment items in streams of sounds.

Benkova (2017) embarked on a similar investigation and gave a pre-test to a control group and an experimental group. After some sessions of explicit training courses, the experimental group performed better and reported that the authentic videos raised their awareness of phenomena such as linking, elision, assimilation, and intrusion. Besides, this pre-intermediate group of

fifteen remarked that the listening experience enhanced their overall listening skills. Unlike the above-mentioned group, the control group of fifteen (15) had a lower performance in the gap filling dictation.

In the same research line, Simpson et al (2019) were interested in difficulties faced by Cantonese ESL learners in acquiring nativelike speech. To attain their goal, they compared the performances of 10 General American native speakers, 10 RP speakers and 60 Cantonese ESL learners from 04 Hong Kong Universities in producing features of connected speech. The instances of the features were proposed in 18 pre-designed sentences. Results revealed that the native speakers of the Standard British English (SBE) outperformed the Native Americans who, in turn, performed better than the Cantonese ESL learners. These results suggest that there is varying degree of the mastery of connected speech amongst native speakers who do not need to learn it while non-native speakers remain at the bottom of performance rung. In both immersive and non-immersive zones, the production of the reduced forms of function words and derivatives remain important and necessary for speech efficiency.

Gobwary et al. (2016) assessed the use of vowel reduction among 60 EFL teachers from some high schools in Ilam city, Iran. Their study aimed at examining the relationship between the production of vowel reduction and gender, teaching experience and academic level. Results from the analysis of thirty sentences containing the target items revealed that the thirty male participants performed better than their female peers in producing weak syllables. Besides, teachers with teaching experience ranging from 16 to 20 years had the highest mean of performance comparing to the ranges below and above. Elsewhere, the study suggests that PhD holders performed better than the Master's Degree holders, who, in turn, performed better than the Bachelor's Degree holders. The argument in this inquiry goes that a better rendition of syllable weakening comes with some years of contact, research and exposure to the language. In other words, the more we use the language, the closer we come to the natural speech.

Tergujeff (2012) observed some EFL teachers during the delivery of some lessons ranging from 6-9 over a period of one week to assess how the teaching of pronunciation is handled in some Finnish primary and secondary schools. Results suggested that the teachers taught pronunciation lessons using traditional methods with emphasis on segmental aspects. Explicit instruction on suprasegmental features, which is one sure way to acquaint learners in non-immersive environments with fast speech, were neglected by the teachers under observation. Teaching learners how to perceive patterns of connected speech and lexical segmentation in ELT has been backed up by Dauer & Brown (1992), Kuo (2013) Field (2003, 2008) Norris, (1993, 1994, and 1995). These studies proposed the teaching of connected speech as an alternative to its natural acquisition which is not an easy task in non-immersive zones. Dictation can be an effective technique to enhance learners' listening skills in perceiving the reduced forms (Field, 2003).

Kuo et al (2016) set out to compare the effects of explicit and implicit training on fast speech perception among some Taiwanese Junior High School students. The three different groups had varying performances in recognising words in streams of sounds. The revelation of a pre-test and a post-test suggested that the experimental group which received an explicit training scored a slightly higher performance than the group which received an implicit training, which, in turn, performed better than the control group which was not involved in neither of the two

types of instructions. This argument in this study shares the claims in some of the above-mentioned works: the perception and production of connected speech is teachable to non-native learners (Brown & Kondo-Brown, 2006; Celce-Murcia et al 2010; Rogerson, 2006). It opens another ray of idea whereby it claims that the explicit training is more beneficial than the implicit one for learners.

Learning songs by heart are good strategies to acquire streams of sound production in any Target Language (TL) generally and English language particularly. Szyska (2015) targeted some educated English users to find out from them what strategies they do use to enhance their pronunciation skills. His participants are 28 higher education teachers and scholars specialised in English phonetics and phonology who are regarded as good pronunciation users (GPU), 33 EFL student-teachers viewed as average pronunciation users (APL). These participants reported they use some personal learning strategies (PLS) which included listening to tapes, following TV broadcasts, listening to songs and some English language learning micro-programs aired on radio station; some mentioned the imitation of native speakers, recording and listening to oneself oral production; others said they make up songs and rhymes to remember how to say words among other personal learning techniques. These techniques are indispensable for a successful acquisition of both practical and theoretical knowledge on the production of assimilation, liaison, elision, or coalescence of sounds in speech. The results obtained in this research are recommendable as connected speech teaching techniques both inside and outside the classrooms where learners are free of time constraint.

Goykoz-Kurt (2016) set out to assess the impact of online training on the perception of the features of connected speech amongst some ESL learners. At the end of a three-week training course, the experimental group performed better than the control group. His second objective was to find out the relationship between attention control and the acquisition of the aspects under inquiry. Reports suggested that learners with better attention control yield better results. Elsewhere, Claudwell (2001) argues that teaching listening and pronunciation should receive separate treatments on the grounds that listening requires more input of authentic speech that builds' the learners' repertoire of reduced forms of weak syllables. Rost (2001) maintains that listening '... is still considered as a mysterious black box for which the best seems to be more practice.' He gathered his ideas from the challenges and experiences of teaching authentic English and recommends that teachers should make efforts to open the black box systematically by sending in more input that precedes and prepares the output. It involves helping learners in getting meaning out of the rhythmic chunks of speech in authentic oral English. This places a huge demand on teachers who should be assisted but not replaced by new technologies such as Computer Assisted Language Learning (CALL). Technologies are no longer needs but musts in learning English language phonology wherein the violation of rules are normal phenomena. Moreover, they are the only learning mates that go beyond dictionary works, paper and pencil exercises and cross into a real-world English.

METHOD

The participants in this study are 45 students from Higher Teacher's Training College (H.T.T.C) Maroua. 18 of them are pre-service student-teachers in the third and final year to obtain a grade I high school teacher's diploma (DIPES I). They are aged between 21 and 27. 27 of the participants are in Level V, the final year, to obtain grade II high school teacher's

diploma. Of these 27 student-teachers from level V, 08 are in-service students. Apart from the fact that they are holders of DIPES I and a Bachelor of Arts degree, they have already taught English as a second language. Their teaching experience ranges from 04-09 years. They are permitted by the Ministry of Secondary Education to refine their training so as to be certified DIPES II holders. The goal of this research consists in assessing the participants' practical and theoretical skills in handling the teaching of connected speech. A passage of twenty (20) pre-designed sentences was used for connected speech dictation in order to verify their abilities to restore the blurred word boundaries; the same material was re-exploited as a transcription text. The participants were asked to transcribe the sentences with particular attention paid to aspects of connected speech such as liaison, assimilation, deletion, coalescence, and weak forms. The twenty proposed pre-designed sentences contain 13 instances of liaison, 13 instances of regressive assimilation, 05 instances of progressive assimilation, 04 instances of coalescence, one (01) instance of intrusion, one (01) instance of elision combined with assimilation, and 44 instances of weak forms, equivalent to 44 function words in unstressed positions. The data is presented in simple statistic tables with figures serving as indicators of the tendencies of the participants' performances in handling the teaching of the aspects in focus.

Presentation of data

The figures in the table below are the number of the participants in the various groups and subgroups. They are obtained by counting the number of student-teachers who successfully got the right transcriptions and those who got the wrong transcriptions as indicated in the first and second columns respectively. The participants with the right performances are those that successfully wrote down all the expected words in each sentence or line. Meanwhile, those that skipped a word or more, substituted one or more or simply, skipped a whole line, and tried to write anything unexpected are considered to be wrong

Table 2: Recapitulation of the respondents' performances in fast speech dictation

Levels Performances	Level Three (18)		Level Five Pre-service (19)		Level Five In-service (08)		Total percentages of right answers
	Right	Wrong	Right	Wrong	Right	Wrong	
Lines							
Line 1	06	12	01	18	01	07	08/45(17.77%)
Line 2	01	11	09	10	05	03	15/45(33.33%)
Line 3	09	09	10	09	04	04	23/45(51.11%)
Line 4	04	14	02	17	02	06	08/45(17.77%)
Line 5	02	16	01	18	01	07	04/45(08.88%)
Line 6	05	13	06	13	01	07	12/45(26.66%)
Line 7	10	08	08	11	05	03	23/45(51.11%)
Line 8	05	13	10	19	05	03	20/45(44.44%)
Line 9	03	15	00	19	00	08	03/45(06.66%)
Line 10	07	11	04	19	03	05	14/45(31.11%)
Line 11	04	14	06	13	00	08	10/45(22.22%)
Line 12	00	18	00	18	00	08	00/45(00%)
Line 13	10	08	09	10	07	01	26/45(57.77%)
Line 14	11	07	08	11	06	02	25/45(55.55%)
Line 15	04	14	01	18	02	06	07/45(15.55%)
Line 16	06	12	07	12	06	02	19/45(42.22%)
Line 17	05	13	03	16	00	08	10/45(22.22%)
Line 18	01	17	00	19	00	08	01/45(02.22%)
Line 19	03	15	02	17	00	08	05/45(11.11%)
Line 20	06	12	04	15	01	07	11/45(24.44%)

A close look at the table above indicates that, for each line, a greater number of participants failed to give the appropriate transcriptions. For instance, none (00%) of the 45 participants could do the appropriate transcription of line 12; only one student-teacher successfully got the right transcription of line 18 (02.22%) from the connected speech dictation. 03 out of the 45 (06.66%) rightly transcribed line 9. These three lines mentioned above are among the hardest to be transcribed by the participants. The lines which had up to 50% of the correct transcription by the participants include lines 13 and 14, thus resulting to 57.77% and 55.55% respectively. Less than half of the total number had the correct transcription

Table 3: Participants' performances in transcription task with features of connected speech

Levels Aspects of connected speech	Level 3 (18)	Level 5 Pre-service students (19)	Level 5 In-service students(08)
Progressive assimilation (05)	3/90(03.33%)	10/95 (10.52%)	06/40 (15%)
Regressive assimilation (13)	19/234(08.11%)	05/247(02.13%)	01/104(0.96%)
Coalescent assimilation (04)	11/72(15.27%)	00/76 (00%)	00/32 (00%)
Liaison (13)	13/234(05.55%)	10/247 (04.04%)	01/104 (0.96%)
Elision/deletion (04)	06/72(08.33%)	01/76 (01.31%)	00/32 (00%)
Intrusion (01)	03/18(16.66%)	00/19 (00%)	00/08(00%)
Elision+ assimilation (02)	Regressive 00/36(00%)	00/36 (00%)	00/16 (00%)
Weak forms (44)	74/792(09.34%)	165/835(09.76%)	74/836(08.36%)
Total average for each subgroup performance	129/756 17.06%	191/1631 11.71%	88/1140 07.71%

The above table shows the statistics of the performances in participants' ability to recognise and produce various aspects of connected speech. The figure represented is obtained by multiplying the frequency of occurrence of each feature by the number of participants in each group. A glance at the figures shows that less than 50% of the proposed instances of each feature was recognised and represented in the phonetic transcription. For example, only 03.33% of all the expected instances of progressive assimilation were recorded in the transcriptions of all the level three student-teachers. They produced 08.11% of the proposed instances of regressive assimilation and 09.34% of all the proposed instances of weak forms.

Looking at the performances of Level 5 pre-service students, no instance of intrusion, coalescence, and elision plus regressive assimilation was recorded. The same observation was made among the in-service student-teachers. They produced 08.36% instances of unstressed items, slightly lower than the performances of their classmates with 09.76% who have neither had an experience in formal teachings nor employment as certified teachers. Generally, it could be observed that the performance vary from one group to another. However, statistics show also that the overall performance in the ability to handle aspects of connected speech is regressive with regard to age and experience as ESL student-teachers. Level three students do not have a degree in English, yet they registered 17.06%, as opposed to pre-service level 5 students, holders of a Bachelor's degree with 11.71%, and in-service level 5 students, holders of DIPES I and Bachelor's degree who recorded 07%. This performance is far below expectation for the latter given that they had undergone training before now and have served

for some time as ELT teachers, thus they should demonstrate some degree of the mastery of such features.

DISCUSSION OF FINDINGS

Much literature on the features of connected speech argue that aspects of English phonology in general, and particularly the issues under investigation are necessary for comprehension and intelligibility when using English as a native, second or foreign language in a globalised world (Kodera, 2012; Matsuzawa, 2006; Roach, 1983, 2000; Pinker, 1983; Rogerson, 2006). The possibility and necessity to teach aspects of connected speech have recorded wide claims as well. English has become indispensable for international relations, technology, sciences, etc. Its spread goes relentlessly but at the expense of its authenticity and standards. A real world, authentic, and natural English is full of weak aspects that pose difficulties in listening for non-native speakers. As a reminder, this work set out to measure student-teachers' ability to recognise and produce the features of connected speech such as liaison, assimilation in its various types, elision, intrusion, and linking. The selected texts served as a means to assess their readiness to teach the above-mentioned features to their eventual learners. For no reason therefore should they exhibit signs of non mastery in any of the phenomena of connected speech. They are models to their learners, as such, they should be acquainted with real world English and enjoy comfortable conversation anywhere with English speakers from any part of the world rather than express feelings of frustration. The results from the tests clearly show that teachers do not have a good mastery of the aspects of connected speech. The majority failed to appropriately transcribe most of the sentences proposed to them in connected speech dictation. In the phonetic transcription task, their performances were far below average. Apart from the weaknesses with the connected speech processes, it has also been found that the participants used some sounds that do not exist in English, doubled consonants, used capital letters in their phonetic transcriptions, and substituted sounds. These results unveil student-teachers' vacuum vis-à-vis the phonological aspects under study and calls for remediation for the benefit of learners (Brown & Kondo-Brown, 2006; Celce-Murcia et al 2010; Rogerson, 2006).

CONCLUSION

This study set out to explore the features of connected speech among ESL student-teachers with focus on assimilation, liaison, Elision, Intrusion and weak forms. From the data collected and analysed, it was noticed that this aspect remains one of the problematic areas of phonology to ESL student-teachers. Their performances in transcribing and producing the targeted features are far below average. This is a strong signal that there is need to pay more attention to rules guiding connected speech as it simplifies the teaching of the phenomenon to learners. Lecturers, inspectors and other stakeholders in the English language domain should take up the challenge to learn, master and teach this branch of English to student-teachers. This vacuum in ESL teachers vis-à-vis this particular aspect of English phonology, which is not included in secondary and high school syllabi in Cameroon, is a pointer to the realities surrounding the teaching of English phonology. What is certain, however, is that the non mastery of these aspects of English language impacts the linguistic performance as well as the linguistic situation of Cameroon in a significant fashion. Hence, ensuring the mastery of this aspect in teacher training schools, inserting it in the school programmes and materials, and a strenuous

follow up of instructions on it are workable ways to solve the problem that triggered the research.

REFERENCES

- Alameen, G.&Levis, J.M. (2015). Connected Speech. *Research Gate*, Retrieved from:<https://www.reseachgate.net/publication/279852347>
- Blazquez, A.,B. (2019). Video segments: A valuable tool for teaching English phonolo-Logical processes. *Argentinian Journal of Applied Linguistics*, Vol 7, (1), pp. 144-163.
- Bobda, S.&Mbangwana, P. (2008). *An introduction English Speech*. Yaounde: B&K Language Institute.
- Brown, J.D. and Kondo-Brown, K. (Eds.) (2006). Perspectives on teaching connecte Speech to second language speakers. Honolulu: University of Hawaii Press.
- Celce-Murcia, M., Donna, M., Janet, M.G., Barry, G. (2010). *Teaching pronunciation: A Course book and reference guide*. (2nd edition). Cambridge: Cambridge University Press.
- Claudwell, R. (2014). Listening and pronunciation need separate models of speech. In J. Levis&S. McCrolin(Eds). *Proceedings of the 5th Pronunciation in Language Learning Conference*, Ames, IA: Iowa state University.
- Crystal, D. (1997). *English as a global language*. Cambridge: Cambridge University Press.
- Dauer, R. M. & Browne, S.C. (1992). Teaching the pronunciation of connected speech. *Proceedings of the 26th Annual Meeting of TESOL*, Vancouver, (pp. 1-8).
- Elabdeen, Z.B. (2015). Problems encountered by non-native speakers in Understanding connected speech of native speakers. An M.A. dissertation submitted in partial fulfilment of M.A.degree in linguistics, Sudan University of Science and Technology.
- Fan, J.Y. (1993). Listening: Problems and solutions. *Teaching English Forum*, 31, (1), pp.16-19.
- Fan, J.Y. (2003). The effects of teaching connected speech rules on listening comprehension. Selected papers from the 12th International symposium on English Teaching, Vol.2, pp.64-73 Taipei, Taiwan, Crane.
- Field, J. (2003). Promoting perception: lexical segmentation in listening. *ELT Journal*, 57, (4) pp.325-334.
- Field, J. (2004). An insight into listener's problems: Too much bottom-up or too much top-down? *System*, 32, 323-377.
- Field, J. (2008). *Listening in the language classroom*. Cambridge: CUP.
- Gobwary, H.,Azizifar, A., Razaei, S. et al (2016). Investigating English vowel reduction pronunciation in EFL teachers of schools. Elsevier: in *International Conference on Teaching and Learning English as an additional language*. GlobELT(14th-17th)2016,
- Goh, C. (2000). A cognitive perspective on language learners' listening comprehensionproblems. *System*, 28, pp.55-57.
- Goykoz-Kurt, B. (2016). Attention control and the effects of online training in improving connected speech perception by learners of English as a second language. A published doctoral thesis from South Carolina University. Retrieved from:<https://scholarscommons.sc.edu/etd>
- Graddol, D. (2000). The future of English? A guide to forecasting the popularity of English Language in the 21st century. London: The British Council.

- Kuo, F. et al (2016). Effects of communicative instructions versus explicit instruction on Taiwanese EFL Junior High School students' word recognition of connected speech. *International Journal of Language and Linguistics*, Vol 3, (2), pp.101- 111.
- Kuo, N. (2008). The effects of English linking instruction on EFL elementary school Students' speech production and phonological awareness. A published Mas-ter's dissertation. National Chung Cheng University, Chiayi, China.
- Kuo, Y. (2010). Using partial dictation of an English teaching radio program to enhance EFL learners' listening comprehension. *Asian, EFL Journal. Professional Teaching Articles*, 47, pp.1-12.
- Kuo, Y. (2011). Taiwanese EFL university students' major listening difficulties and possible solutions. *The Journal of National Defence University General Edu-cation*, 1, pp.309-331.
- Kodera, M. (2012). Teaching connected speech and high school education in Japan. Humanities and Natural Sciences. Vol (42), p.173-192-Retrieved from <https://Scribd.com/document/331897227>.
- Kodera, M. (2012). Teaching connected speech and high school education in Japan. *Humanities and Natural Sciences*. Vol (42), p.173-192-Retrieved from <https://>
- Kondo- Brown, K. (). *Perspectives on Teaching Connected Speech to Second Language Speakers*.
- Matsuzawa, T. (2006). Comprehension of English Reduced Forms by Japanese. Business People and the Effectiveness of Instruction. In J. D. Brown, & K. Kondo-Brown (Eds.), *Perspectives on Teaching Connected Speech to Second Language Speakers*. (pp.59-66). Honolulu, Hi: University of Hawai'i, National Foreign Language Resource Center.
- Nokes, J. (2018). Whaddya call that again? Materials for teaching connected speech. *Second Language Studies*, 36(2), pp. 27-153.
- Norris, R.W. (1994). Keeping up with native speaker speed: An investigation of reduced forms and instructions. *Second Language Students*, Vol.21, (1), pp.49-78.
- Norris, R.W. (1995). Teaching reduced forms: putting the horse before the cart. *English Teaching Forum*, 33, 47-57.
- Olmedo, C.J.(2015). The assimilation of features of connected speech in ESL students. An M.A. dissertation submitted in partial fulfilment for the requirements of Master's Degree, University of Valladolid.
- Pinker, S. (1995). *The Language instinct: How the mind creates language*. New York: Harper Perennial.
- Roach, P. (1983). *English phonetics and phonology: A practical course* (1st edition). Cambridge: Cambridge University Press.
- Roach, P. (2000). *English phonetics and phonology: A practical course* (4th edition). Cambridge: Cambridge University Press.
- Rogerson, M. (2006). Don'chaknow? A survey of ESL teachers' perspectives on reduced forms instruction. In Brown, J.D. and K. Kondo-Brown (Eds.). *Perspectives on teaching connected speech to second language speakers*. (pp.83-97). Honolulu: University of Hawaii Press.
- Rogerson-Revel, P. (2011). *English phonology and pronunciation teaching*. London: Continuum International Publishing Group.
- Rost, M. (2001). Listening in R. Carter and D. Nunan (eds). *The Cambridge guide to teaching English to speakers of other languages*. (pp7-13): CUP.

- Simpson, W.L., Wong, J.D., Vina, W.H., & Peggy, P.K. (2019). Production of English connected speech processes: an assessment of Cantonese ESL learners' difficulties obtaining nativelike speech. *The language Learning Journal, GlobELT*, pp.604-611.
- Szyska, M. (2015). Good English pronunciation learning strategies. *Research in Language*, Vol.3 (1), pp.93-106.
- Tergujeff, E. (2012). English pronunciation teaching: Four case studies from Finland. *Journal of Language Teaching and Research*, Vol. 3, (4), pp.599-607.
- Underhill, A.(1994). *Sound foundations*. Great Britain: Heinemann.

Appendix

The test paper

Instruction: Transcribe the following sentences as they occur in connected speech. Attention should be paid to the underlying phenomena such as assimilation, elision, intrusion, and coalescence.

1. Did you see the good girl that hit you?
2. Could you hand my purse now?
3. We can go to the green park in my car.
4. Your presence here in this difficult time is a pair of arms around me.
5. Her back pack was lost at the media r event.
6. Keep off this building. It is not for rent.
7. Put off the cooker; I have finished frying the eggs.
8. The Maroua main market is full of shoplifters.
9. The good girl surfed google all night for a good boy.
10. She can buy four eggs and ten pies.
11. The blue ink spilled on the white towel.
12. The Russian swimmer secured a good yacht from Belgium.
13. Yesterday she walked back from school.
14. A week ago, she pushed him off the marital bed.
15. Do you want boiled or fried eggs boys?
16. The tear of love wetted her face.
17. Do it carefully.
18. We need all.
19. Skin producers are rare in Kenya.
20. She wanted tin milk.