

**THE PRE-FORTIS CLIPPING OF THE /P/,/T/,/K/  
PHONEMES ON LARRY PAGES SPEECH**

**A PAPER**

Submitted to the School of Foreign Language – JIA as a partial fulfillment of requirements for the undergraduate degree in English Literature Programme



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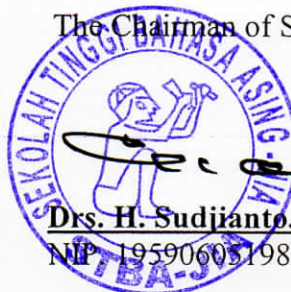
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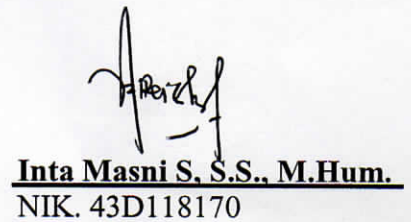
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## **MOTTO AND DEDICATION**

### **MOTTO :**

*" Where there is a will, there is a way"*

### **DEDICATION :**

*This paper is dedicated to my parents, my husband, and my daughter*

# **THE PRE-FORTIS CLIPPING OF THE /P/,/T/,/K/ PHONEMES ON LARRY PAGES SPEECH**

**RENY JUNITA**

## **ABSTRACT**

This study is aimed to explain the sound pre-fortis clipping of /p/,/t/,/k/ phonemes in English. The subject of the research is Larry Pages speech. The research uses a descriptive analysis qualitative research. This research combined main theory pre-fortis clipping of Ashby (2011) and main theory vowel and consonant of Rogers (2013). The data from this research are forty, which include two data of phoneme /p/, twenty three data of phoneme /t/, and fifteen data of phoneme /k/. The process in analyzing the data is: (1) preparing the data, (2) analyzing the data, (3) discussing the data, and finally (4) concluding the data. The results of the research show that pre-fortis clipping of phoneme /p/ word emerged two times (5%), pre-fortis clipping of phoneme /t/ word emerged twenty three times (57.5%), pre-fortis clipping of phoneme /k/ word emerged fifteen times (37.5%).

Keywords : phoneme, pre fortis, speech

# **PRE-FORTIS CLIPPING PADA FONEM /P/,/T/,/K/ DALAM PIDATO DARI LARY PAGES**

**RENY JUNITA**

## **ABSTRAK**

*Penelitian ini ditunjukkan untuk menjelaskan pre-fortis clipping dalam bahasa Inggris. Media penelitian yang diteliti adalah pidato dari Lary Pages. Penelitian ini menggunakan metode deskriptif analisis kualitatif. Penelitian ini menggabungkan teori utama dari Ashby (2011) tentang pre-fortis clipping dan Rogers (2013) sebagai teori utama tentang konsonan dan vokal. Data penelitian ini mencapai empat puluh, yang terdiri atas dua data pre-fortis clipping fonem /p/, dua puluh tiga data pre-fortis clipping fonem /t/, dan lima belas data pre-fortis clipping fonem /k/. Proses analisis data ini adalah : (1) menyiapkan data, (2) menganalisis data, (3) mendiskusikan data, dan yang terakhir (4) membuat kesimpulan data. Hasil penelitian ini menunjukkan bahwa pre-fortis clipping pada fonem /p/ muncul sebanyak dua kali (5%), pre-fortis clipping pada fonem /t/ muncul sebanyak dua puluh tiga kali (57.5%), pre-fortis clipping pada fonem /k/ muncul sebanyak lima belas kali (37.5%).*

*Kata kunci : fonem, pre fortis, pidato*

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First of all, the writer would like to thank to Allah Subhanahu wa Ta'ala for always blessing, giving health, strength, and loving, until the writer is able to finish this paper. Because, it is impossible for the writer to finish it without the permission and opportunity that has been given by Allah Subhanahu wa Ta'ala.

This paper is written as the last assignment to fulfill one of the requirements for taking undergraduate program (SI) of English Department of School of Foreign Languages-JIA. In this paper, the writer explains and analysis about the pre-fortis clipping of the /p/,/t/,/k/ phoneme in Lary Pages speech.

During the process of making this paper, the writer encountered a lot of hardship and difficulties both finding the data and arranging it into an accepted scientific paper. Therefore, the writer would like to take this opportunity to express her thankfulness to all the following people who have advised and supported data and information to finish this paper, also for them having prayed for her success, especially to:

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4. Imron Hadi, S.S., M.Hum., the Head of English Department of the School of Foreign language-JIA Bekasi, and as academic advisor.
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7. All the lovely friend in STBA JIA for their motivation, support, laught and cry.
8. Her lovely husband Aji Suryo Dewo and daughter Armaera Azria Elshanum for their support, patient and prayer.
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At last, the writer really hopes this paper will be useful especially for her, and generally for everyone reading it.

Bekasi, August 11<sup>st</sup>, 2018

RJ

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## **CHAPTER I**

### **INTRODUCTION**

#### **A. The Background of the Research**

Voiced sound and written symbol can be learn one of field in linguistic. Linguistics is the scientific study of language, and many topics are studied under this subject. At the heart of linguistics is the search for the unconscious knowledge that humans have about language and how it is that children acquire it, an understanding of the structure of language in general and of particular languages, knowledge about how languages vary, and how language influences the way in which humans interact with each other and think about the world.

Language is the sum of all human experience since the beginning of human kind. Without language, humans would be unable to express their feelings, thoughts, emotions, desires, and beliefs. Without language, there could be no society and possibly no religion. That way language is very important for human life. Human could be misunderstanding because no tool for communication with each other.

Language is generally described as a system of sound used to link sound using words and sentences to meaning. Languages can be describe as a symbolic system in which sound and meanings are assigned to each other, allowing humans to communicate what are thinking and how humans feeling.



In other words and sound. As native speakers of a language, human know that words and sound. As native speakers of a language with meaning to express ideas. As a system, the language consist of components-components which are regularly arranged according to certain pattern. Language is a human system communication that uses arbitrary signals, such as voice sound, gestures, and/or written symbol.

Human beings can communicate with each other. Human able to exchange knowledge, beliefs, opinions, wishes, threats, commands, thanks, promises, declarations, feelings – only our imagination sets limits. Human can laugh to express amusement, happiness, or disrespect, human can smile to express amusement, pleasure, approval, or bitter feelings, human can shriek to express anger, excitement, or fear, human can clench our fists to express determination, anger or a threat, human can raise our eyebrows to express surprise or disapproval, and so on, but our system of communication before anything else is language.

Many things in this world have related to sound. Everyday humans hear many types of sounds: bells ringing, machinery clunking, dogs barking, leaves rustling, people talking. Phonetics studies the sounds used in human language. Phonetics is part of the wider field of linguistics, which studies language as a whole.

Phonetics is concerned with the sounds humans make in speech: how humans produce them, how these sounds are transferred from the speaker to the hearer as sound waves, and how humans hear and perceive them. Several

thousand languages are spoken in the world; obviously humans cannot look at the sounds of each one of them. In this case human as a language user need to observe or learn how the sounds of language can be produced by humans. For that human must have a language science that supports us in facilitating to find where and how the birth of the sounds of the language. Therefore, human need to have a linguistic science, such as phonology, phonetics, and phonemic science.

Phonology refers to the sound system of language. For example in English, there are consonant clusters that are naturally difficult to pronounce by native English speakers because they are inconsistent with the English phonological system, but the consonant cluster may be easily pronounced by native speakers of other languages whose phonological system contains such consonant clusters. A simple example is the pronunciation of the 'ng' at the beginning of a word, only acceptable in the Indonesian phonological system, but unacceptable in the English phonological system.

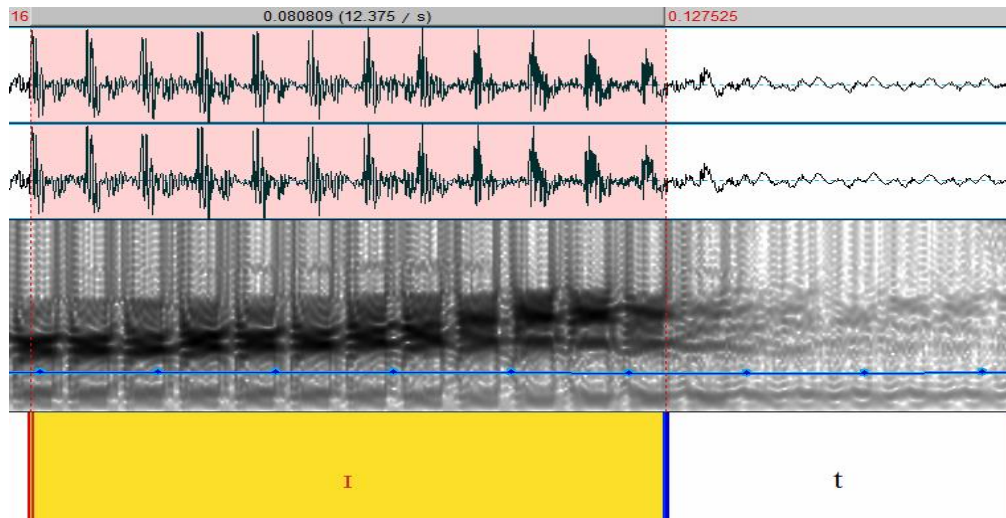
Phonology is about the underlying design, the blueprint of each sound type, which serves as the constant basis of all the variation in different physical articulation of that sound type in different physical articulation of that sound type in different context. When we think of the [t] sound in the word tar, star, writer, and eighth as being the same, we actually mean that, in the phonology of English, they would be represented in the same way. In actual speech, these [t] sound are all very different.

One of the most commonly used speeches in the memorials, seminars, and celebrations from the past in the speech. A leader, an expert, a teacher, and a student should try to have general speaking skills and have the ability to address audiences in particular because at some point in time human will be required to make a speech. Speech is very important thing both now and in the future, because speech is the delivery and cultivation of the mind, information, or from speaker's ideas to the public. A good spoken person will be able to convince his listeners to accept and obey the thought, information, ideas, or messages conveyed.

Speech is one form oral speech activity. As an oral spoken form, speeches emphasize the expression of ideas and reasoning by using spoken language supported by non-adaptation aspect (face expressions, gesture, eye contact, etc). Therefore speeches is an activity of conveying ideas orally by using appropriate reasoning and utilizing non-maturity aspect that can support the efficiency and effectiveness of disclosure of ideas to the crowd in a particular event.

From the explanation above, the writer gives two examples of the data are taken in the speech of Larry Pages:

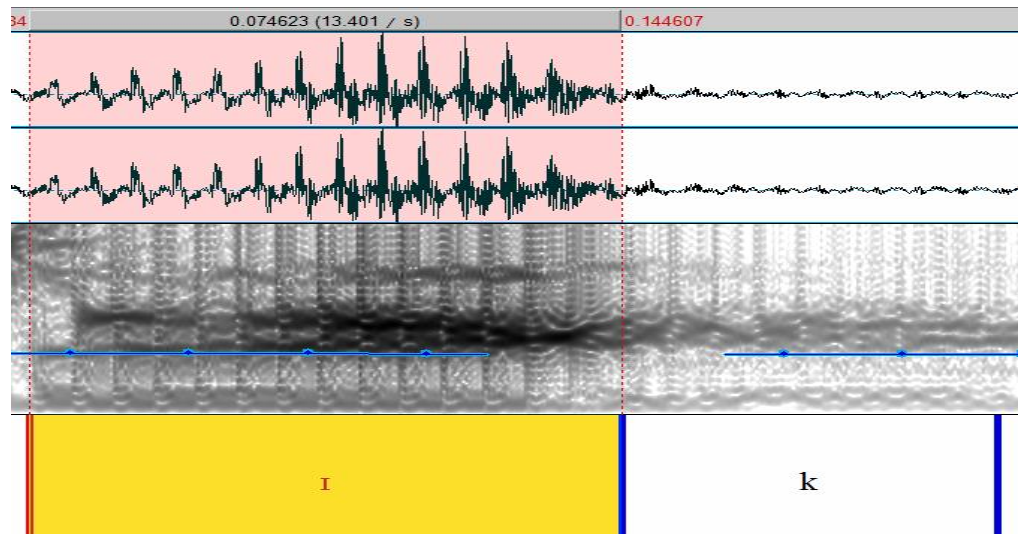
- a) It is a **great** honor for me to be here today. (00:40 minute)



**Picture 1.1** Spectrogram of the word great

The above *great* is written /gret/ phonemically. Vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable, that is one ending a stop consonant /t/. Consonant /t/ occur in the final of word of /gret/ , fortis stop /t/ is aspirated at the final of a stressed syllable. Aspiration involves a delay in the onset of voicing, that is, in the segment following the aspirated stop, voicing does not begin immediately, but is delay slightly. When the syllable is closed by a fortis consonant, /gret/ , the vowel is appreciably shorter in duration. The vowel in *great* measures 0.080/s, from this measures we call this effect pre-fortis clipping.

b. we shall **take** part in (14:16 minute)



**Picture 1.2** Spectrogram of the word take

The above take written /teɪk/ phonemically. Vowel /ɪ/ is one of lax vowel. The tense vowel /i/ occur in closed syllable, that is one ending a stop consonant /k/. Consonant /k/ occur in the final of word of /teɪk/ , fortis stop /k/ is aspirated at the final of a stressed syllable. Aspiration involves a delay in the onset of voicing, that is, in the segment following the aspirated stop, voicing does not begin immediately, but is delay slightly. When the syllable is closed by a fortis consonant, /teɪk/ , the vowel is appreciably shorter in duration. The vowel in *take* measures 0.074/s, from this measures we call this effect is pre-fortis clipping.

The writer chossen Larry Page as he is an American computer scientist and internet entrepreneur who co-founded Google. The writer will identify his speech for finding a syllabel that contain pre fortis clipping of /p/,/t/,/k/ phoneme. Based on the explanation that has been mentioned above, the writer

interested in taking research entitled “ **The Pre-Fortis Clipping Of The /p/,/t/,/k/ Phonemes On Larry Pages Speech** “.

## **B. Question and Scope of the Research**

### **1. Question of the Reseach**

Based on the description above, the writer is going to state something problem of the study, they are :

- a. Are the pre- fortis clipping of /p/, /t/, /k/ phonemes processes found in Larry Page speech?
- b. How to identify the position of pre-fortis clipping of /p/, /t/, /k/ phonemes in Larry Page speech?
- c. What phonemes of /p/,/t/,/k/ appears mostly in Larry Page speech?

### **2. Scope of the Research**

In this research the analysis just focuses on how to analyze pre-fortis clipping of phonem /p/,/t/,/k/ phonologically. The analysis just take pre-fortis clipping that consist in the word from the speech by Larry Pages. Theories which are used by 1. Ashby (2011), and 2. Rogers (2013). By classifying and analyzing pre-fortis clipping by his environment, people can understand the pre-fortis clipping of /p/,/t/,/k/ phonemes from his speech correctly.

## **C. Objectives and Significances of the Research**

### **1. Objectives of the Reseach**

Based on the problem of the reseach mentioned above, the objectives of the reseach are described as follow :

- a. To find the pre-fortis clipping /p/,/t/,/k/ are used or not
- b. To describe how the processes happen in Larry Page speech.
- c. To know pre-fortis clipping processes happen mostly in Larry Page speech.

## **2. Significances of the Research**

Hopefully this writing of this research gives beneficial knowledge both for the writer and the reader to improve the understanding of English especially in education matter. The significance of the research are describe as follow :

Theoretically, the benefit of this research on theorical add knowladge about linguistic branch are phonetic and phonology. Phonetic in this research for finding kind of sound of phoneme /p/,/t/,/k/. While in phology is for proving that phoneme of /p/,/t/,/k/ will be experience process pre fortis clipping when that phonemes find with vowel in syllable. From this research hope to give the information that branch of linguisttic have related each other.

Practically, for the writer, this research is adding more knowledge about phonetic and phonology. Know the consonant differences between fortis and lenis in the pronunciation of a syllable. Apparently found that between fortis and lenis have differences in the duration of pronunciation. In this case writer will prove that there is difference of duration between fortis and lenis. It will be more specific in the fortis consonant called pre-fortis clipping.

For the reader, this research may give a contribution to other especially the research about pre-fortis clipping in phonology that interested to learned. How to learn about duration in syllable at speech.

#### **D. Operational Definition**

After having read and understood many theories of the little components, which have been found in the various books phonology, the writer can conclude and give explanation that :

##### a. Phonetics

Phonetic is a branch of linguistics that focuses on the production and classification of the world's speech sounds.

##### b. Phonology

Phonology is studies the sound systems of languages and how sounds function in relation to each other in a language.

##### c. Speech

Speech is the vocalized form of communication used by humans and some animals, which is based upon the syntactic combination of items drawn from the lexicon.

#### **E. Systematization of the Reseach**

The systematic of the paper means to present tye paper in well-edited composition. This paper is devided into five chapters as follows:



Chapter I is introduction. It explains about the background of the research, the scope of the problems, the question of the research, the objective of the research, the significance of the research, the operational definition, and the systematization of the research.

Chapter II is theoretical description. It consists of some theories taken from many references to support the research such as definition of phonetic, phonology, phonemes, and pre fortis

Chapter III is methodology of the research. This chapter explains about subject of the research, method of the reseach, instrument of the research, technique of the data analysis, and procedure of the research.

Chapter IV is research findings and discussion. It gives explanation about the data description, the data analysis, the data interpretation, and the discussion throught the research.

Chapter V is conclusion and suggestion. In this chapter, the researcher gives the summary from all chapter nad some suggestions relating to the result of the research.

## **CHAPTER II**

### **THEORETICAL DESCRIPTION**

This chapter discusses the theories, which support in answering the research problem. Those theories include pre-fortis clipping, meaning of pre-fortis clipping, and process of the pre-fortis clipping.

#### **A. Definition of Phonetic and Phonology**

Phonetic and Phonology are concerned with speech, with the ways in which humans produce and hear speech. Talking and listening to each other are so much part of normal life that they often seem unremarkable.

##### **1. Phonetic**

Odgen (2009) stated that phonetics on the other hand is the systematic study of the sounds of speech which is physical and directly appear. Phonetics is sometimes seen as not appropriately linguistic, because it is the outward, physical manifestation of the main object of linguistic research, which is language (not speech): and language is abstract (p.1)

Following Birjandi and Nodoushan (2005) Phonetics is one of part linguistics which is concerned with the production, physical nature, and perception of speech sounds. The main fields of study are experimental phonetics, articulatory phonetics, phonemics, acoustic phonetics, and auditory phonetic (p1). In other hand Martlett (2001) phonetics deals with the physical aspects of the sounds of languages, especially how sounds are

articulated and felt, but not how they are organized. A person trained in phonetics is able to transcribe words from virtually any language (p 2).

Adding Rogers (2013) in his book stated that:

Phonetics is concerned with the sounds we make in speech: how we produce them, how these sounds are transferred from the speaker to the hearer as sound waves, and how we hear and perceive them. Several thousand languages are spoken in the world; obviously we cannot look at the sounds of each one of them. We will examine English in detail first because it is the language that you are all familiar with; this will be followed by an introduction to acoustics. Finally we will survey the kinds of sounds found in languages all over the world (p.1).

Based on description above, it can be concluded phonetics is about the physical aspect of sounds, it studies the production and the perception of sounds, called phones. Phonetics has some subcategories, but if not specified, we usually mean "articulatory phonetics": that is, "the study of the production of speech sounds by the articulatory and vocal tract by the speaker". Phonetic transcriptions are done using the square brackets, [ ].

## **2. Phonology**

Ladefoged (2011) in his book said that "phonology is the description of the systems and patterns of sounds that occur in a language" (p. 33) . It involves studying a language to determine its distinctive sounds, that is, those sounds that convey a difference in meaning. In other hand Marlett (2001) stated, "Phonology is the study of the organization of sounds in language. Our study of phonology looks at two major aspects. One aspect that we consider is the inventory of sounds that a language has. A second aspect we consider is the set of rules which specify exactly how each sound

is pronounced and how sounds affect and are affected by the sounds around them (p.8).

From the explanation above the writer can conclude that Ladefoged and Marlett have similar opinion in basic definition of phonology, but Ladefoged emphasizes that the different sound can be change the meaning of word, while Marlett in his book emphasizes other sound aspect. From the two experts above the writer can assume that phonology is the study of the system, rules, and pattern of sound in language. (Odden, 2005, p.2).

Another expert Carr (2008) stated that Phonology is the study of the sound systems only found in human languages. Some interpretation phonology as the study of the functions of speech sounds. Base on the definition, phonology is functional phonetics. Others have a more mentalistic conception of what the discipline of phonology is; they see sound systems as being objects represented in the minds of human beings (p.130).

Based on description above, it can be conclude phonology is about the abstract aspect of sounds and it studies the phonemes (phonemic transcriptions adopt the slash / /). Phonology is about establishing what are the phonemes in a given language, i.e. those sounds that can bring a difference in meaning between two words.

## **B. History of Phonetic and Phonology**

### **1. Phonetic**

According to Ashby in site <http://www.oxfordbibliographies.com> on state that the word “phonetic” and its transcription began to be used in English in the 1840s, and although significant concept in the science of speech can be traced across a range of cultural traditions (and back through history into Antiquity) the modern form of the subject is mainly a 19th-century European creation. Contributions from British pioneers A. J. Ellis (b. 1814–d. 1890) and A. M. Bell (b. 1819–d. 1905) were especially important, and the following establishment of phonetics as the basis of linguistic science as a whole can be attributed particularly to the influence of Henry Sweet (b. 1845–d. 1912) and Eduard Sievers (b. 1850–d. 1932).

The dominant comparative-historical linguistics of their day has since been overtaken by several changes of paradigm, though phonetics has hold its position as what Sweet called “the indispensable foundation” of language study. Since the mid-19<sup>th</sup> century, therefore, phonetics has had a continuous and cumulative history as an interdisciplinary field sited at the three-way intersection of biomedical science (at first, mainly physiology), physical science (in the early days, especially acoustics), and linguistic science. Each of those areas has undergone radical diversification and development, with the result that the total field of phonetics is now huge. Any attempt at a bibliography must therefore be highly selective.

## **2. Phonology**

Jansen (1993) quote from the publication of Chomsky & Halle's *The Sound Pattern of English* (1968, hereafter SPE) was a major landmark of both phonological theory and the phonological description of English. This volume has formed the basis of discussion of phonological issues ever since its appearance, both for those who accept its premises and for those who reject them. The study of phonology has filled the attention of scholars ever since there has been interest in language from a scientific (as opposed to literary) point of view. The oldest known phonological study is Pānini's (third century B.C.) grammar of Sanskrit, which includes a full description of morphology and syntax as well as phonology.

SPE is now referred to as a LINEAR theory of phonology, in that its representations are a linear series of segments and boundaries. Furthermore, SPE standard phonology to syntax, claiming that the job of phonology is to interpret the surface syntactic structure phonetically. This surface syntactic structure in turn is derived by inserting lexical items into constituent structure trees, which may have to undergo various sorts of transformations before deriving the surface syntactic structure on which phonological rules can operate (p.1-7).

## **C. Phonetic and Phonology in Linguistic**

### **1. Phonetic**

Phonetic as a subject of study is nowadays considered to be part of linguistics. Phonetic in departments of linguistics in universities it is still a subject with more autonomy than other areas, for various reasons: it is the only section of linguistics which deals almost entirely with the spoken language (the exception being the relationship between sounds and spellings); it is often heavily dependent on instruments and even more dependent on computers than other areas of language study; it depends on data more than other areas of linguistics; and it depends on scaled measurements more than other areas of linguistics. (Cruttenden, 2014, p 3)

Based on Ogden (2009) he stated the linguistic phonetic study of a language implicate working out how the sounds of language (the 'phonetic' part) are used to make meaning (which is what makes it 'linguistic', and not just the study of the sounds people can make with their bodies): how words are shaped, how they are say together, how similar (but different) strings of sounds can be distinguished (such as 'I scream' and 'ice cream'), how particular shades of meaning are conveyed, and how the details of speech relate systematically to its inherently social context (p.2).

## **2. Phonology**

Phonology is one of the subject fields that composes the discipline of linguistics, which is defined as the scientific study of language structure. One way to understand what the subject matter of phonology is, to contrast it with other fields within linguistics. A very brief explanation that phonology have different explanation from another study linguistic such as

sentence structure (syntax) or word structure (morphology), or how languages change over time (historical linguistics). phonology is the study of sound structure in language.

This definition is very simple, and also inadequate. An important feature of the structure of a sentence is how it is pronounced – its sound structure. The pronunciation of a given word is also a fundamental part of the structure of the word. And certainly the principles of pronunciation in a language are subject to change over time. So the study of phonology eventually touches on other domains of linguistics.(Odden, 2005, p2)

#### **D. The Basic Sound of Speech**

Phoneticians divide sounds into two basic categories: segments and suprasegmentals. Segments comprise vowels and consonants. Vowels include things like the sounds in the words oh, eye, ooh, ah; they are made with no major obstruction in the vocal tract so that air passes through the mouth fairly easily. Consonants, such as /p n g s l/, involve some type of obstruction in the vocal tract. Suprasegmentals involve sound components other than consonants and vowels. These include a variety of things such as stress, pitch, intonation, and length.

##### **1. Transcription**

“Transcription is the use of phonetic symbols to write down the way an utterance (a stretch of speech) is pronounced” (Rogers, 2013, p.16). One obvious goal of phonetics is to be able to transcribe accurately any utterance



in any language. Achieving this goal is in fact rather more complex than might think at first.

Phonetic transcription: the use of alphabetic symbols to represent the sounds of speech. This is the kind of representation found in dictionary entries, for instance, to represent the pronunciation of words with inconsistent spellings, like ‘plough’, ‘tough’, ‘trough’, ‘cough’ and ‘although’. The practice of using written letters to represent the sounds of speech is called phonetic transcription (Odgen, 2005) Transcriptions represent an analysis of the sounds people can hear, so transcriptions often have a linguistic status. It is useful for phoneticians to write down what people can hear, and people need to do this in a way that is systematic, easy to use, easily understood by others, and portable – a notepad and a pencil predate modern recording equipment by many years, and remain the cheapest tools of the phonetician’s trade (p. 21).

Adding Rogers and Odgen, Skandera and Burleigh (2005) each sound must be represented consistently by the same symbol, and conversely, there must be a separate symbol for each distinctive sound. Such a one-to-one correspondence between speech and writing is referred to as a phonographic relationship. The symbol that people use to represent speech sound in this manner are phonetic symbol. A whole set of them form a phonetic alphabet. The term phonetic transcription refers to the process of writing down spoken language in phonetic symbol as well as to the resultant written text (p.7-8).

Transcription also explained by Roach (2009) One of the traditional exercises in pronunciation teaching by phonetic methods is that of phonemic transcription, where every speech sound must be identified as one of the phonemes and written with the appropriate symbol. Such a transcription would be called a phonetic transcription; a phonetic transcription containing a lot of information about the exact quality of the sounds would be called a narrow phonetic transcription, while one which only included a little more information than a phonemic transcription would be called a broad phonetic transcription. One further type of transcription is one which is basically phonemic, but contains additional symbolic information about allophones of particular symbols: this is often called an allophonic transcription. (p. 44-45).

## **2. Accents of English**

Skandera and Burleigh (2005) said a standard variety has a fixed grammar and vocabulary, but its pronunciation may vary according to the regional origin, social group, or ethnicity of the speaker. People use the term accent to refer to the way a variety is pronounced. It is quite possible, then, that a standard variety is spoken in different accents. One of these accents usually carries the most prestige, and is used as a model in the teaching of pronunciation. The pronunciation features of language variety is called accent (p.6).

Crystal (2008) explained about the cumulative auditory effect of those features of pronunciation which identify where a person is from, regionally

or socially. The linguistics literature pointing that the term refers to pronunciation only, and is thus distinct from dialect, which refers to grammar and vocabulary as well. The research of the ways in which accents differ from each other is sometimes called accent studies (p.3).

In addition Ashby (2011) that this shows us is that while accents are principally thought of as being a geographical phenomenon, accents are also socially conditioned. Geographically, they are an independent part of a dialect – independent in the sense that a person might fulfill with the rules of standard English regarding grammar and lexis but may still speak with an accent (p.11).

Accent also explained by Roach (2009) explained that languages have different accents: they are pronounced differently by people from different geographical places, from different social classes, of different ages and different educational backgrounds. The word accent is often confused with dialect. People use the word dialect to refer to a variety of a language which is different from others not just in pronunciation but also in such matters as vocabulary, grammar and word order. Differences of accent, on the other hand, are pronunciation differences only (p.14).

### **3. Consonant**

Birjandi and Nodoushan (2005) said on his book that the general term that refers to a class of sounds where there is obstruction of some kind (i.e., complete blockage, or constriction) to the flow of pulmonary air is called consonants (p. 51). There are six different degrees of obstruction. Therefore,

consonants can be classified into six different categories on the basis of their manner of articulation:

TYPE	PHONEME
Plosives	/p/ /b/ /t/ /d/ /k/ /g/
Fricatives	/f/ /v/ /θ/ /ð/ /h/ /s/ /z/ /ʃ/ /ʒ/
Affricates	/tʃ/ /dʒ/
Nasals	/m/ /n/ /ŋ/
Approximant	/r/ /w/ /j/
Lateral	//

**Table 2.1** Type of Consonants

Furthermore Birjandi and Nodoushan, Skandera & Burleigh (2005) also added:

English sounds are made with air that is pushed up from the lungs. In the obstructed in the throat, technically called the pharyngeal cavity or pharynx or in the vocal tract before it leaves the body through the mouth or nose. production of approximately two thirds of these sounds, the air-stream is These sounds are called consonants. An important feature for the description of consonants is the exact place where the air-stream is obstructed. The place of articulation names the speech organs that are primarily involved in the production of a particular sound. (p.13).

In the other hand Crystal (2008) explained that one of the two general categories used for the classification of speech sounds, the other being vowel. Consonants can be defined in terms of both phonetics and phonology. Phonetically, they are sounds made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so restricted that audible friction is produced. Consonant articulations are

relatively easy to feel, and as a result are most conveniently described in terms of place and manner of articulation.

In addition, a routine phonetic description of consonants would involve information about the mode of vibration of the vocal folds (see voicing), and it is often necessary to specify the duration of the sound, the airstream mechanism involved and the direction of airflow (egressive or ingressive). From a phonological point of view, consonants are those units which function at the margins of syllables, either singly or in clusters (p.103).

Based on Odden (2005) said that consonant symbol are treating the place of articulation where the major constriction occurs as one axis, and treating properties such as voicing, being a continuant, or nasality as the other axis. Eleven places of articulation for consonant are usually recognized : bilabial, labiodental, dental, alveolar, alveopalatal, retroflex, palatal, velar, uvular, pharyngeal, and laryngeal, an arrangement which a consonant at a certain place of articulation is produced, indicating how airflow is controlled: the standard manners include stops, fricatives, nasals, and affricates (p. 26-27).

#### **4. Vowel**

(Kelly, 2000, p.29) That vowels are articulated when a voiced airstream is shaped using tongue and the lips to modify the overall shape of the mouth. There is twelve and eight diphthong generally using by English speaker . It is very important to keep in mind what it is exactly which make phoneme valid as a unit analysis; the distinctions between phonemes hold, in that they are units which differentiate between word meaning.

As explained by Davenport & Hannahs (2005) in his book, vowel are different articulated in a manner than consonants: the articulators are far enough apart to allow the airflow to exit unhindered, that is with open approximation. Given this, the manner of articulation classifications used for consonants are inappropriate for vowel.

Moreover, vowels are produced in a smaller area of the vocal tract- the palatal and velar regions which means that the consonantal place specifications are also inappropriate. Further, given that vowels are sonorants, they are typically voiced, hence the voiced/voiceless distinction important for consonants is generally unnecessary (p.38).

Vowel also explained by Rogers (2013) English vowels are commonly divided into two categories: tense and lax. In English, the tense vowels are longer than the lax ones, usually a little higher and a little more to the periphery of the vowel area than the corresponding lax vowels; however, the muscles of the vocal tract are not necessarily in a state of greater tension during the production of tense vowels (p.71).

Summary of vowel phonotactics	
Tense Vowel	/i/, /ej/, /ɒ/, /ɜ/, /əw/, /u/, /aj/, /aw/, /ɔj/, /ɪə/, /uə/, /εə/
Lax Vowel	/ɪ/, /ε/, /æ/, /ɒ/, /ʌ/, /u/, /ə/

**Table 2.2** Kinds of Lax and Tense Vowel

Another expert also explained the same thing, Ladefoged (2011)

The vowels of English can be divided into what may be called tense and lax sets. These terms are really just labels used to designate two groups of

vowels that behave differently in English words. There are phonetic differences between the two groups, but they are not simply a matter of muscular tenseness versus laxness (p.98).

## 5. Stress

According to Ladefoged & Johnson (2011) Stress is most easily identified in quote forms. In conversational speech, words can be unpressure, and when this happens, some of the properties of stressed syllables may not be realized. In another forms, a stressed syllable is usually produced by pushing more air out of the lungs in one syllable relative to others. A stressed syllable thus has greater respiratory energy than neighboring unstressed syllables. It may also have an increase in laryngeal activity. Stress can always be defined in terms of something a speaker does in one part of an utterance relative to another (p.111).

Another expert also explained the same thing, Ashaby and Maidment (2005) stress affects whole syllables rather than single segments. The effect of stressing a syllable it to make it more raised, more audible than another syllables. Thus, stress is a relation feature. The way in which a stressed syllable is made more prominent than other syllables in the utterance is usually by a combination of factors : length, loudness, and pitch.Thus, usually a stressed syllable is longer and louder than its neighbours and may be marked by some pitch movement or new level in pitch. (p.155-156)

Stress also explained by Oden (2005) in his book.The marking of stress generally encompasses the distinction between primary stress, notated with

an acute accent [´], and secondary stress, marked with a grave accent [ˋ]; alternatively, raised and lowered ticks [ˊ, ˌ] may be placed before the initial consonants of a stressed syllable. It is notoriously difficult to give any simple definition of the acoustics or articulation of stress, and indeed the phonetic realization of stress seems to vary considerably across languages, being expressed in terms of amplitude, pitch, duration, vowel quality, as well as a host of other properties. Typically, though, stressed syllables have higher pitch and greater duration and amplitude (p.23).

Moreover Clemente (2011) stated that English as having three traditional approaches degrees of stress: Primary, secondary, and unstressed. However, if stress is defined as relative respiratory force (that is, it involves greater pressure from the lungs than unstressed syllables), as most phoneticians argue, and is inherent in the word rather than the sentence (that is, it is lexical rather than prosodic), then these traditional approaches conflate two distinct processes: Stress on the one hand, and vowel reduction on the other.

In this case, another name the primary stress is actually prosodic stress, whereas secondary stress is simple stress in some positions, and an unstressed but not reduced vowel in others. Either way, there is a threeway phonemic distinction: Either three degrees of stress, or else stressed, unstressed, and reduced. From the two approaches are sometimes combined into a four-way 'stress' classification: primary (tonic stress), secondary



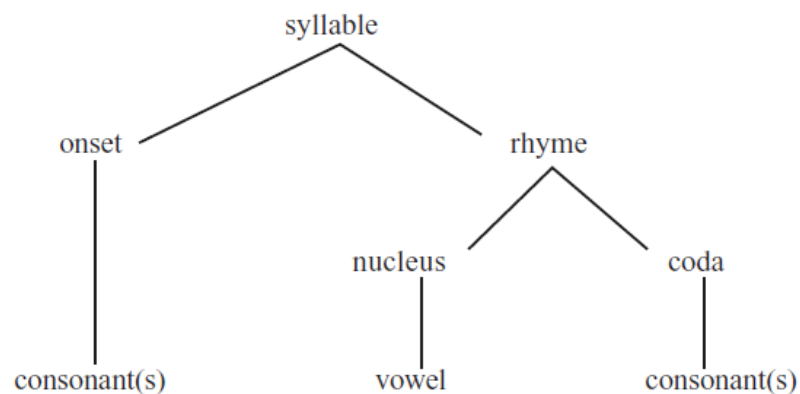
(lexical stress), tertiary (unstressed full vowel), and quaternary (reduced vowel) (p.10).

## E. Parameters of Variattion in Vowel

### 1. Syllable

According to Yule (2006) A syllable must contain a vowel (or vowel-like) sound. The most common type of syllable in language also has a consonant (C) before the vowel (V) and is typically described as CV. Technically, the basic elements of the syllable are the onset (one or more consonants) and the rhyme. The rhyme (sometimes written as ‘rime’) occured of a vowel, which is treated as the nucleus, plus any following consonant(s), described as the coda.

Many kind of basic structure syllable found in English words like *green* (CCVC), *eggs* (VCC), *and* (VCC), *ham* (CVC), *I* (V), *do* (CV), *not* (CVC), *like* (CVC), *them* (CVC), *Sam* (CVC), *I* (V), *am* (VC) is shown in the accompanying diagram (p. 47).



**Picture 2.1** Structure of syllable

Beside Yule, Rogers (2013) also added all languages must have syllables. Although linguists are in general agreement as to what a syllable is in terms of consonants and vowels, phoneticians have a another opinion for describing precisely the articulatory actions that make up a syllable and the actions that divide a string of consonants and vowels into a series of syllables.

The vowel of a syllable, and any following semivowel, is regarded as the nucleus or centre of the syllable. The elements before the nucleus are called the onset; and the elements after the nucleus are called the coda. The nucleus and coda taken together are known as the rhyme (P.88).

Other expert also explained about it, Hayes (2009) in discussing about syllables, it is useful to be able to refer to certain substrings of them. The onset of a syllable is defined as the consonant or order of consonants at the beginning of a syllable. The meaning of coda is the consonant or sequence of consonants at the end of a syllable. The nucleus of a syllable is the vowel or diphthong found at the syllable's core and have function as its sonority peak (sometimes peak is used instead of nucleus). It is obligatory for a syllable to have a nucleus, very common for a syllable to lack a coda, and less common for it to lack an onset (p.251).

## **2. Clipping**

Ashby ( 2011) stated length in the contrastive sense – the sort just explored above – is controlled by the speaker and has phonological status.

However, there are also purely phonetic processes at work that affect the duration of a vowel. One such process is called clipping.

Two forms of clipping appear in English and these processes affect the duration of all vowels, long and short alike. Principly, in particular phonetic environments, the duration of a given vowel is shorter than it would be if it was the norm allophone (the usual way of realizing a phoneme, by which all other variants are judged).

In English, this is caused either when a syllable is end by a voiceless consonant (also called a fortis consonant) or when a stressed vowel is followed by multiple unstressed syllables within the same rhythm unit (often referred to as a rhythmic foot). These two contexts give rise to what are called pre-fortis clipping and rhythmic clipping respectively (p.104).

### **3. Phonological Lenght Differences**

#### **a. Fortis and Lenis**

Roach (2009) stated that, the description of them makes it clear that it is not very accurate to call them "voiced"; in initial and final position they are impossibly voiced at all, and any voicing they may have seems to have no perceptual importance. Some phoneticians say that p, t, k are produced with more push than b, d, g, and that it would therefore be better to give the two sets of plosives (and some other consonants) names that indicate that fact; so the voiceless plosives p, t, k are sometimes called fortis (meaning 'weak') and b, d, g are then called lenis (meaning 'strong'). It may well be true that p, t, k are produced with more force,

though nobody has really proved it - force of articulation is very difficult to define and measure. On the other hand, the terms fortis and lenis are difficult to remember. (p.39).

Meanwhile Cruttenden (2014) defined, In English a voiceless/voiced pair such as /s,z/ are distinguished not only by the appearance or absence of voice but also by the degree of breath and muscular effort involved in their articulation. Those English consonants which are usually voiced tend to be articulated with relatively weak energy (they are LENIS), whereas those which are always voiceless are relatively strong (they are FORTIS). /s/, may have very little voicing, so that the energy of articulation becomes a significant factor in distinguishing the voiced and voiceless series called voiced consonant (p.31).

In addition Yavas (2011) defined, English /b/, /d/, /g/ are fully voiced only in intervocalic position, several phoneticians prefer the classification in terms of fortis and lenis to differentiate /p/, /t/, /k/ from /b/, /d/, /g/. Accordingly, fortis stops /p/, /t/, /k/ are pronounced with more muscular energy (force), higher intra-oral pressure, and a stronger breath effort than their lenis counterparts /b/, /d/, /g/ (p.58-59).

Skandera and Burleight (2005) in his book said the voiced/voiceless contrast discussed above is usually joined by a difference in the force with which the air-stream is pushed up. Voiced sounds are usually made with a relatively weak breath force, or little muscular tension. This is called a lenis articulation [Latin, 'soft'; ungespannt]. Voiceless sounds, on

the other hand, are made with more force, or higher tension. This is called a fortis articulation [Latin, 'hard'; gespannt].

Occasionally hear the terms "soft" and "hard" in popular usage to describe speech sounds or their articulation. The symmetrical relationship between voiced/voiceless and lenis/fortis does not always hold. Whereas fortis sounds are indeed always voiceless in English, lenis sounds, which are usually voiced, may also occur as voiceless variants, i.e. they can be devoiced. (p.12-13).

#### **4. Pre-Fortis Clipping**

Ashby (2011) when vowels in English occur in open syllables (syllables with the structure CV) or in ones closed by a lenis consonant (any of the so-called voiced obstruents or any of the sonorant consonants), they are usually pronounced with their 'norm' duration – that is to say, all vowels have their full length whether they are members of the longer or shorter vowel groups.

However, when a vowel occurs in a syllable closed by a fortis consonant, the vowel becomes appreciably shorter in duration. This difference can be measured in either speech using waveforms or spectrograms.(p.104-105)

In the other hand from journal Kiss (2013) stated only the voiceless stops /p/, /t/, /k/ can be aspirated, and another sounds can not aspirated (as in e.g., pat [phæt], tip [thip], kick [khik], but not bat \*[bhæt] or fat \*[fhæt]). The voiceless stops (the input of the Aspiration rule) form a natural class. Another well-known rule from English phonology is Pre-Fortis Clipping. According to this rule, vowels become clipped (shortened) before any

voiceless (“fortis”) consonant (/p/, /t/, /k/, /f/, /T/, /s/, /S/ and /ʃ/). In this case the conditioning sounds in the rule (“voiceless consonants”) form a natural class (p.9)

Moreover Roach (2009) said There are six plosive consonants: p, t, k, b, d, g. The glottal plosive occurs frequently but it is of less importance, since it is usually just an alternative pronunciation of p, t, k in certain contexts. The plosives have different places of articulation. The plosives p, t, k are always voiceless; b, d, g are sometimes voiced, sometimes partly voiced and sometimes voiceless.

The plosives /p/,/t/,/k/ can occur at the end of a word (final position). Final b, d, g normally have little voicing; if there is voicing, it is at the beginning of the compression phase; p, t, k are always voiceless. The plosion following the release of p, t, k and b, d, g is very weak and often not heard. The difference between p, t, k and b, d, g is mainly the fact that vowels preceding p, t, k are much shorter. The shortening effect of p, t, k is most noticeable when the vowel is one of the long vowels or diphthongs. This effect is sometimes known as pre-fortis clipping. (p. 37-39).

Ashby and Maidment (2005) explained about pre-fortis clipping is the vowel has been shortened by the appearance of a following fortis consonant and this is regular feature of many accents of English and also of other language. It is known as pre fortis clippng (p.97). This type of reduction generally affects vowels. In return, a clipped vowel is pronounced quicker

when it is located next to a voiceless consonant. Compare the following minimal pairs:

*rice* /raɪs/ (with clipped /aɪ/) and *rise* /raɪz/

*sit* /sɪt/ (with clipped /ɪ/) and *seat* /si:t/

Based on journal by Cizzewski (2012) the title is Stressed Vowel Duration and Phonemic Length Contrast he explained about pre fortis clipping is since on the other hand, pre-fortis clipping is aerodynamically conditioned 'because the transglottal pressure difference creating the airflow driving vocal fold vibration is hard to maintain in the face of the impedance by the oral constriction of obstruents. Its effect on vowel duration is likely to be observed even if distinctiveness is not threatened (e.g. in a randomised experimental input). This does not mean, however, that it must occur as the aerodynamic conditioning may be successfully counterbalanced by the prosodic one (which may also be aerodynamic in nature). Pre-fortis clipping, then, is both an articulatorily motivated and speaker-controllable parameter which may be hidden (i.e. producing statistically and perceptually insignificant differences in vowel duration) when the vowel contrast is safe. (p.219)

Base on the description above, the writer can conclude pre fortis clipping is process arises from the fact that the length of a vowel is strongly determined by the voicing of the consonant that comes after it. The term fortis is equivalent to voiceless and clipping stands for shortening. So,

when a stressed vowel is followed by a voiceless consonant within the same syllable, the length of that vowel is considerably reduced.

## 5. Phonetical Length Differences

### a. Voice and Voiceless

Crystal (2008) explained a basic term used in the phonetic classification of speech sounds, based on to the auditory result of the vibration of the vocal folds; also called voicing. Sounds produced while the vocal folds are vibrating are voiced sounds, e.g. [b, z, a, i]; those produced with no such vibration are voiceless or unvoiced, e.g. [p, s, h] (p.514).

All the consonants are subclassified as either voiced or voiceless. At the phonation stage, the vocal folds are in tight contact for the production of voiced consonants, while the air for voiceless consonants passes through the glottis with vocal folds set apart. All the sonorant sounds are voiced . This is the list of voiced and voiceless consonants.

Obstruents	
Voiced	Voiceless
/b/	/p/
/d/	/t/
/g/	/k/
/v/	/f/



/z/	/s/
/ʒ/	/ʃ/
/ð/	/θ/
/dʒ/	/tʃ/
	/h/

**Table 2.3** Voice and Voiceless Consonant

In another opinion from Katamba (1989) once in the larynx, the air must pass through the glottis. This is the space between the vocal cords. If the vocal cords are apart, i.e. if the glottis is open, the air escapes free. Sounds produced in this way are said to be voiceless. If, on the other hand, the vocal cords are very close together, the air will blow them apart as it forces its way through. In doing so, it will make them vibrate, producing a voiced sound (p.3-4).

Based on Ladefoged and Johnson (2011) If the vocal folds are apart like breathing the air from the lungs will have a relatively free section into the pharynx and the mouth. But if the vocal folds are adjusted so that there is only a limited section between them, the airstream from the lungs will set them vibrating. Sounds produced when the vocal folds are vibrating are said to be voiced, as opposed to those in which the vocal folds are apart, which are said to be voiceless (p.4).

From Ashby and Maidment (2005) in their book said that voiceless is another adjustment of the glottis that is of great importance in the production of speech. If the vocal folds are held gently together and air

under pressure from the lungs is pushed between them, the folds can be made to vibrate evenly to produce the tone we call voice. If a vowel sound such as [i] or [a] is sustained, the tone heard is contributed by the vibrating folds. A sound of this type is said to be voiced. The airflow is converted into sound energy not at the larynx, but elsewhere in the vocal tract. There is no tone from larynx, and nothing will be felt with fingertips applied. (p.22-23)

## **6. Speech**

Lucas (2012) stated that the speech communication process includes seven elements: speaker, message, channel, listener, feedback, interference, and situation. The speaker is the person who begins a speech transaction. Whatever the speaker communicates is the message, which is sent by means of a particular channel. The listener receives the communicated message and provides feedback to the speaker. Interference is anything that impedes the communication of a message, and the situation is the time and place in which speech communication occurs. The interaction of these seven elements decides the outcome in any instance of speech communication (p. 25-26).

## **F. Research of the Relevant**

From researches that have been done, the writer found researchers that discuss about pre-fortis clipping of various theories and various data sources that used as sources of the research. These researches can be explained as follows.

Wiktor Gonet and Lidia Stadnicka from Maria Curie-Skłodowska University, Polandia 2005 make journal about pre fortis clipping. The title is : Vowel Clipping In English. This paper was to discussion that English fortis consonants shorten the duration, or ‘clip’, the preceding vowels. They makes an enquiry into the conditioning of clipping with regard to intrinsic vowel duration in two speaking modes: monosyllables and connected speech.

The diffrences from the writer research is they are discuses clipping in monosyllables and connected speech. This journal focus only in vowel not in consonant. They are not mention spesifically the vowels.

Meanwhile, Radek Skarnitzl from Karlova v Praze University 2016 analyze about pre fortis shortening, the title of journal is pre-fortis shortening in Czech English: A Production And Reaction-Time Study. This paper was discussion about focuses on the production and perception of English words with a fortis vs. lenis obstruent in the syllable coda. The contrast is mostly cued by the duration of the preceding vowel, which is shorter before fortis than before lenis sounds in native speech. The diffrences from the writer research is the writer only analyze the fortis.

The writer also found another relevance research in the internet. The title is : Stressed Vowel Duration Nad Phonemic Lenght Contrast. This research made in University of Gdansk by Tomasz Ciszewski. This study was generally accepted that greater vowel/syllable duration is a reliable correlate of stress and that absolute durational differences between vowels underlie phonemic length

contrasts. The different from the writer only discuss about short vowel with stress syllable.

From another relevant title is *Measuring Vowel Duration Variability In Native English Speakers And Polish Learners* from Andrzej Porzuczek from University of Silesia in 2012. This research present a set of simple statistical measures that illustrate the difference between native English speakers and Polish learners of English in varying the length of vocalic segments in read speech. Relative vowel duration and vowel length variation are widely used as basic criteria for establishing rhythmic differences between languages and dialects of a language. The different with writer only focus to make relevance only in English speaker.

The another journal that the writer found by John Hajek and Mary Stevens from the journal title *Vowel Duration, Compression And Lengthening In Stressed Syllables In Central And Southern Varieties Of Standard Italian* from University Of Melbourne, Australia. The journal explain abouts the first investigation of the effects of regional accent on temporal organization, specifically of vowel duration, in stressed syllables in standard Italia. The different from the writer is they are focus on effect of vowel duration not consonant.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **A. Method of the Research**

##### **1. Time and Place of the Research**

This research cover the entire process of work begins from the determination of title to the reporting process research. The writer has collated data and source in the form of a wide variety of books as a necessary reference obtained from the library of JIA and also from eBook as a reference used in completing the paper. The writer conducted and collecting of data and theory needed for the writing process. Writing activity consists of collecting reference, collect data, and analyzes data. This research was begun in March 2018 and finished in August 2018.

##### **2. Kind of the Research**

In the implementation of the research should see appropriate methods to fit the research objective. The data for this research is taken from speech. The research analyze the pre-fortis clipping of /p/,/t/,/k/ that exist in the speech. According to Tylor and Bogdan (2016) This research is using the qualitative methodology refers in the broadest sense to research that produces descriptive data—people’s own written or spoken words and observable behavior (p.7). This research needs some steps to make an analysis and to do the research. One of them is collecting the data. It is important for the research.

Method of the research in scientific way to get data with purpose and specific usefulness. In this research needs a method to make it easier especially to collecting data. Because of that in this research used qualitative method, where in the data collected non-experimentally in the speech.

Analyzing qualitative data requires understanding how to make sense of text and image so that you can form answer to your research question. You will learn about the six steps involved in analyzing and interpreting qualitative data preparing and organizing the data, exploring and coding the database, describing findings and forming themes, representing and reporting findings, interpreting the meaning of the findings, and validating the accuracy of the findings.

To use qualitative method means that you will do the six steps above, preparing and organizing data is important to make our analysis easily. Exploring and coding the database make the data clearly where the data source, and the authenticity of the data can be accountable. (Creswell, 2012, p. 236)

In additional qualitative method can be used obtain the intricate details about phenomena such as feelings through process, and emotions that are difficult to extract or learn about through more conventional research methods. Basically, there are three major component of qualitative research. First there are the data which can come from various sources. Second, there are procedures that researcher can use to interpret and organize the data. Other procedures are part of the analytic process. These include non-

statistical sampling. Thus, this research using Larry Pages speech as the data source and this study of qualitative methodology is consistent with the research.

## **B. Procedure of the Research**

In this research the writer does some procedures after understanding the role of systematical and considering the arranged step as follows :

### **1. Preparation**

The several basic things during the writing are to identify the problem, select the fixed title, to formulate and to limit the statements of the research and to consider the advantage later. This research uses some theories books to support and to prove the analysis of the research in the next chapter. Despite having read some books, it is important to seek some advice from Advisor I and Advisor II.

### **2. Implement**

In order to obtain the research, the implementation presents analyzing the pre-fortis clipping of /p/ /t/ /k/ which can be found in the Larry Pages Speech.

### **3. Finishing**

#### **a. Composing the analyzed data**

Before reporting the result to finish the research, the data analysis need to be composed after giving the mark, to be gathered with syllable

word in the speech that consist pre-fortis clipping of /p/, /t/, /k/ phonemes.

**b. Discussing with the counselor**

Discussing with first and second counselor has been done every time to maximize the result of the research.

**c. Revising the result**

During the analys chapter, it is important to seek advice about how to analyze the devoiced phoneme in the speech by Lary Pages from counselor I and counselor II. The counselors gave some correction on mistaken words in the material or technical in writing. Revising the mistakes in the research is important to make the research better

**d. Concluding the result**

The final phase to make the research can be understood is concluding the result of all chapter. The result is based from all chapters in the research. The research can be conclude with the meassuring the syllable of pre-fortis clipping of /p/, /t/, /k/ phonemes in speech by Lary Pages.

**C. Technique of the Data Collection**

The writer uses some technique in finishing this research which are library research and linguistic technique. In process of completing the research, the writer used JIA's library and University of Atma Jaya's library to obtain several information and data. The linguistics source the writer used is obtained on several books in that library and eBook.



#### **D. Technique of Data Analysis**

In the research process, the writer uses descriptive qualitative and tries to analyze the data by collecting some reference as books and e-books which are related to this paper. There are some techniques that the writer had done to analyze the data: collecting data, classifying data, identifying data, analyzing data and the result for references and many sources regarding pre-fortis of /p/,/t/,/k/.

Firstly, The technique is listening the data through speech from Lary Pages. The data is pre-fortis clipping of /p/,/t/,/k/ found in speech from Lary Pages. The writer listen the speech that contain syllabe of pre-fortis clipping /p/,/t/,/k/ carefully. Then these data are reviewed, collected and sorted based on the published data by making a spectrogram.

Secondly, after found the syllable containing phoneme of /p/, /t/, /k/. The writer looking at to oxford dictionary to identify experienced pre fortis clipping and how the phonetically write. The syllable was contained the phonem of /p/,/t/,/k/, input the syllable to spectrogram for measuring the lenght of that syllabel and make sure that syllabe had pre-fortis clipping.

Thirdly, after the data had collected. The writer will be explained by using table in the interpretation of the research findings. Lastly, the writer make

conclusion and suggestion to answer the problem. Based on data analysis describe above, the writer hope to analyze all data found correctly and clearly.

## **E. Source of the primary and secondary Data**

### **1. The primary data**

The writer uses Lary Pages speech as a primary data which actually consist of many phonemes, especially for having pre-fortis clipping of /p/, /t/, /k/ phonemes cases. The speech by Lary Pages. The speech is taken from [www.youtube.com](http://www.youtube.com).

### **2. The secondary data**

The secondary data the writer uses are based on several articles dictionary, website, language journals, some previous research in the same field and phonology book which related to pre-fortis clipping of /p/, /t/, /k/ as the main focus in the research.

## CHAPTER IV

### DATA ANALYSIS

#### A. Data Description

The problem of the research will be answered in this chapter. This chapter presents the data analysis and the interpretation of research findings and discussion. After understanding the theory review in chapter II and determining the method and technique which is appropriate in chapter III, next step is collecting data. The speech which is going to be analyzed is “ Lary Page’s University of Michigan Commencement Address”. Analyze consisting of one speech, the total of data are 40. The speech from :

*<https://www.youtube.com/watch?v=qFb2rvmrahc&t=1s>*

Finding data in the Lary Pages speech analyzed according to some step . The first step was listening the speech repeatedly thus the data content and context of the text were gained. The data collected from the speech. The writer classified the data. This classification was done by finding the syllable containing phonemes of /p/,/t/,/k,/ The next step, the writer analyze the syllable duration of pre-fortis using praat programme. At the end, the duration produced by a syllable containing pre-fortis clipping will have short duration result. Those data are presented bellow.

**Table 4.1** Data Description

<b>No</b>	<b>Data</b>	<b>Minute/time</b>
1	Met	01:58
2	Right	02:13
3	Spot	02:19
4	Put	02:20
5	Got	02:33
6	About	03:22
7	Graduate	04:00
8	Sit	04:17
9	Stake	04:22
10	But	04:31
11	Make	05:54
12	Night	05:57
13	Woke	06:10
14	Wake	06:20
15	Stop	06:21
16	Out	06:25
17	Take	06:33
18	Great	06:59
19	Transit	07:44
20	Futuristic	07:53
21	Pack	08:42
22	Stick	08:43
23	Like	08:44
24	Track	09:17
25	Credit	09:26
26	Back	09:27
27	Truck	09:28
28	Might	10:55
29	Shot	10:57
30	Forget	11:02
31	Hot	11:55
32	Straight	12:08
33	Trip	12:32
34	Flight	12:33
35	Back	12:40
36	Took	12:59
37	Upset	13:02
38	Take	14:16
39	Bright	14:38
40	Insight	15:06

## B. Data Analysis

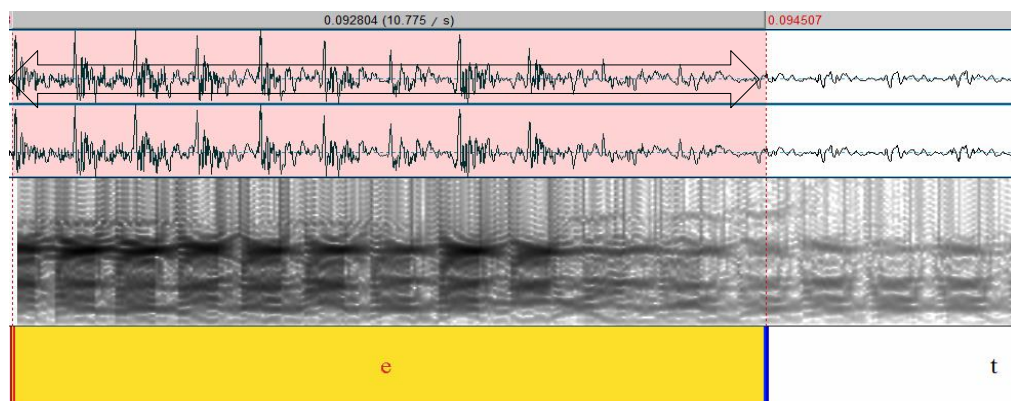
In data of the research the analyze from the Lary Pages Speech by which contains plosive phonemes : /p/,/t/,/k/ discribing pre-fortis clipping of those phonemes.

Below are analyses of pre-fortis clipping of /p/,/t/,/k/ phonemes that have been found in the speech from Lary Pages :

### Datum 1 :

...and that's how they **met**... (01:58).

The above **met** is written /met/ phonemically. In the syllable **met**, containing vowel /e/ before consonant /t/. In phonetic vowel /e/ is one of lax vowel. The lax vowel /e/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



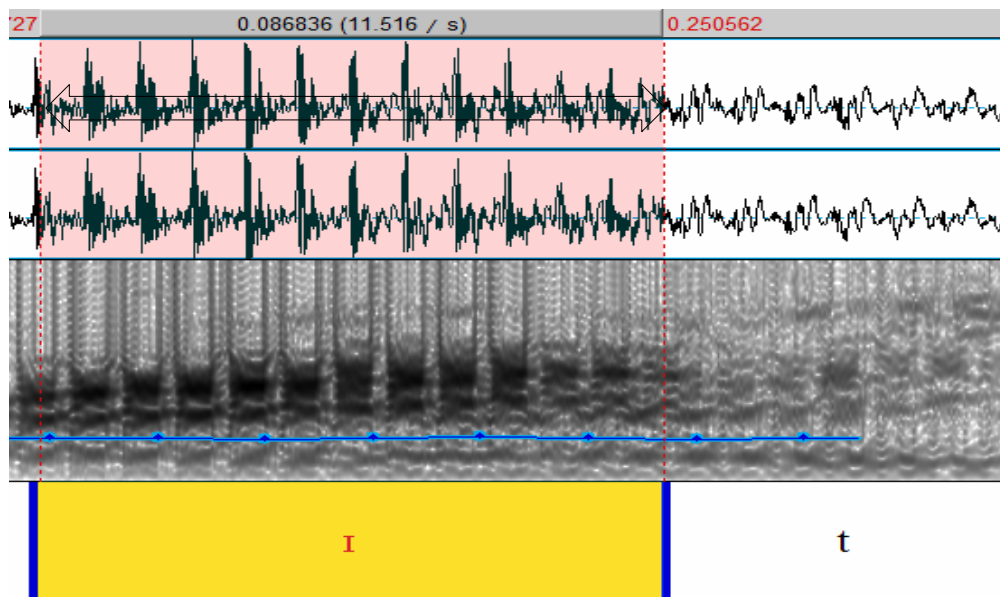
**Picture 4.1** Spectrogram of Syllable Met

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **met** is voiceless, and this would clip the duration of the preceding vowel /e/ measures 0.092/s. From this measure it is called effect pre-fortis clipping.

**Datum 2 :**

... **right** here at Michigan.... (02:13)

The above **right** is written /raɪt/ phonemically. **Right** has one syllable, that containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



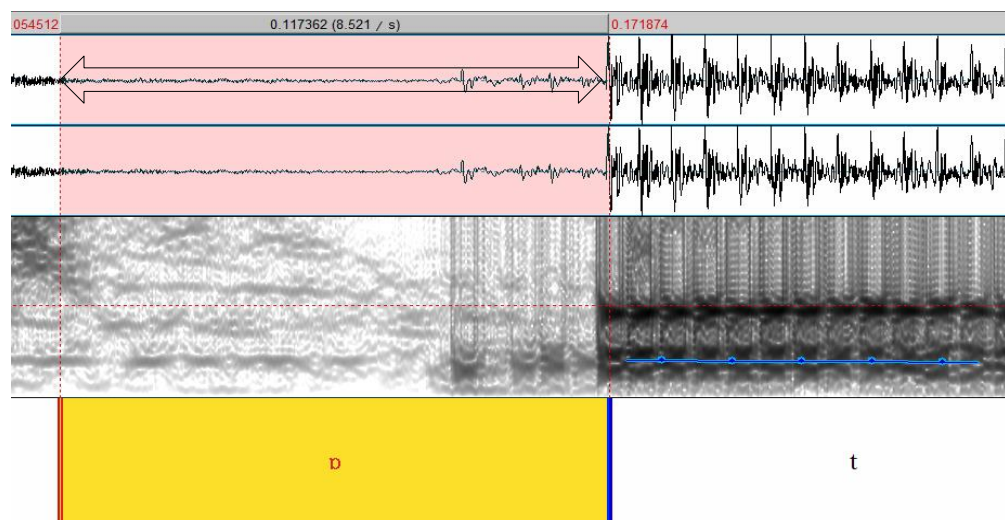
**Picture 4.2** Spectrogram of Syllable Right

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **right** is voiceless, and this would clip the duration of the preceding vowel /ɪ/ measures 0.086/s. From this measures the syllable **right** exposed pre-fortis clipping.

**Datum 3 :**

... and we should probably go find the **spot**...(02:19)

The above **spot** is written /spɒt/ phonemically. In the syllable **spot**, containing vowel /ɒ/ before consonant /t/. In phonetic vowel /ɒ/ is one of lax vowel. The lax vowel /ɒ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



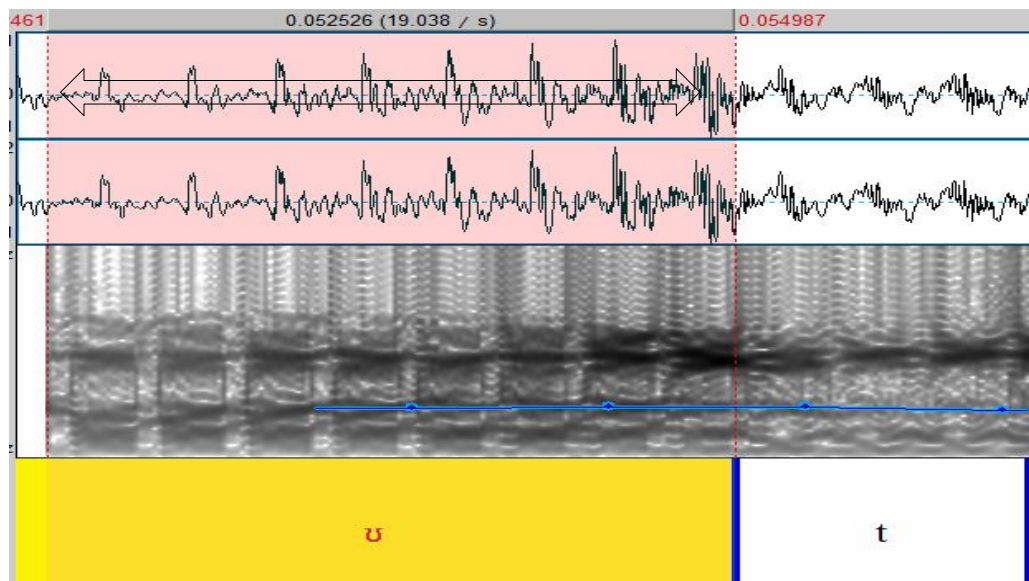
**Picture 4.3** Spectrogram of Syllable Spot

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **spot** is voiceless, and this would clip the duration of the preceding vowel /ʊ/ measures 0.117/s. From this measure it is called effect pre-fortis clipping.

**Datum 4:**

... and **put** a plaque...(02:20)

The above **put** is written /pʊt/ phonemically. **Put** has one syllable, that containing vowel /ʊ/ before consonant /t/. In phonetic vowel /ʊ/ is one of lax vowel. The lax vowel /ʊ/ occur in closed syllable. Vowel form behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



**Picture 4.4** Spectrogram of Syllable Put

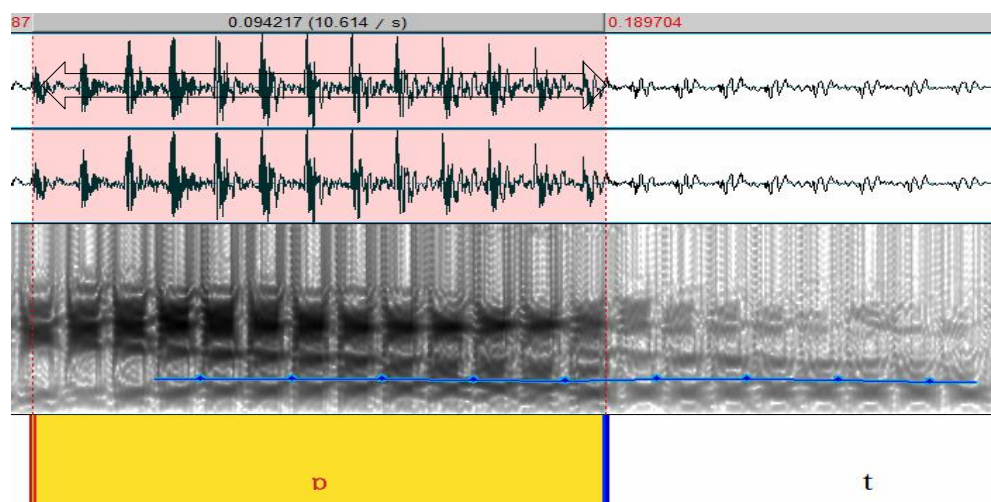


This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **put** is voiceless, and this would clip the duration of the preceding vowel /ʊ/ measures 0.052/s. From this measures the syllable **put** exposed pre-fortis clipping

**Datum 5 :**

.. my dad actually **got** the quantity...(02:33)

The above **got** is written /gɒt/ phonemically. In the syllable **got**, containing vowel /ɒ/ before consonant /t/. In phonetic vowel /ɒ/ is one of lax vowel. The lax vowel /ɒ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



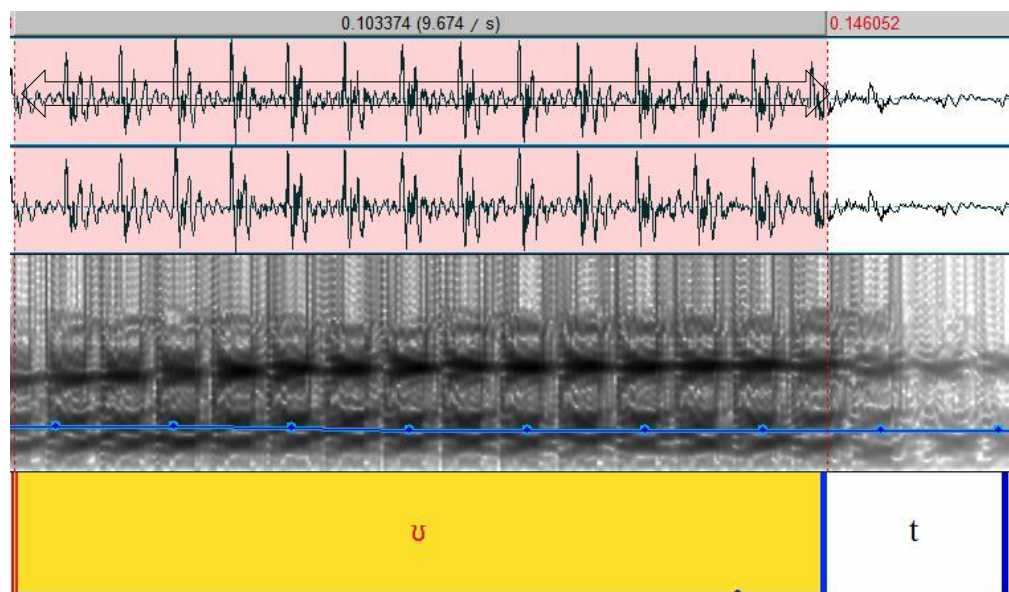
**Picture 4.5** Spectrogram of Syllable Got

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **got** is voiceless, and this would clip the duration of the preceding vowel /ʊ/ measures 0.094/s. From this measure it is called the effect of pre-fortis clipping.

#### Datum 6 :

...the one you're are **about**....(03:22)

The above **about** is written /ə'baʊt / phonemically. **About** has one syllable, containing vowel /ʊ/ before consonant /t/. In phonetic vowel /ʊ/ is one of lax vowels. The lax vowel /ʊ/ occurs in a closed syllable. Vowel form behaviour can affect not only the steady state of a consonant structure but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



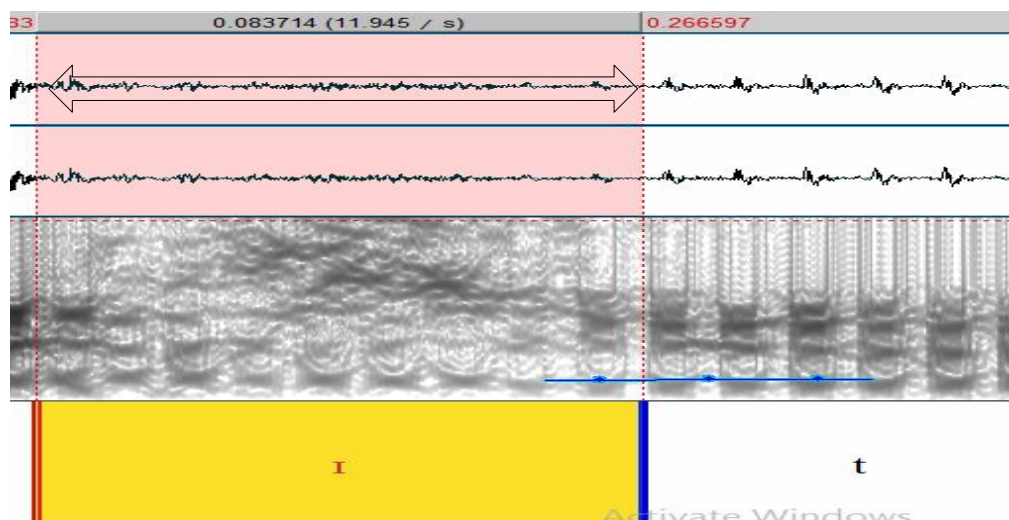
Picture 4.6 Spectrogram of Syllable About

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **about** is voiceless, and this would clip the duration of the preceding vowel /ʊ/. The vowel in **about** measures 0.103/s. From this measures the syllable **about** exposed pre-fortis clipping

**Datum 7 :**

...both his kids actually did **graduate** from...(04:00)

The above **graduate** is written /grædʒueɪt/ phonemically. In the syllable **graduate**, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant structure but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



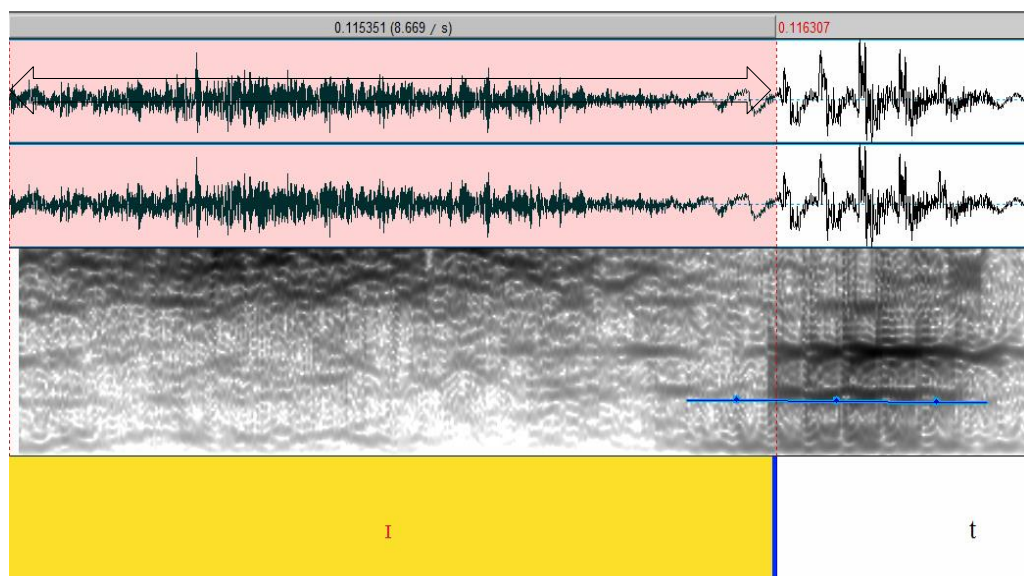
**Picture 4.7** Spectrogram of Syllable Graduate

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using praat above, the syllable final /t/ in **graduate** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **graduate** measures 0.083/s. From this measures it is called effect pre-fortis clipping.

### Datum 8

...them during the **sit**-down...(04:17)

The above **sit** is written /sɪt/ phonemically. **Sit** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



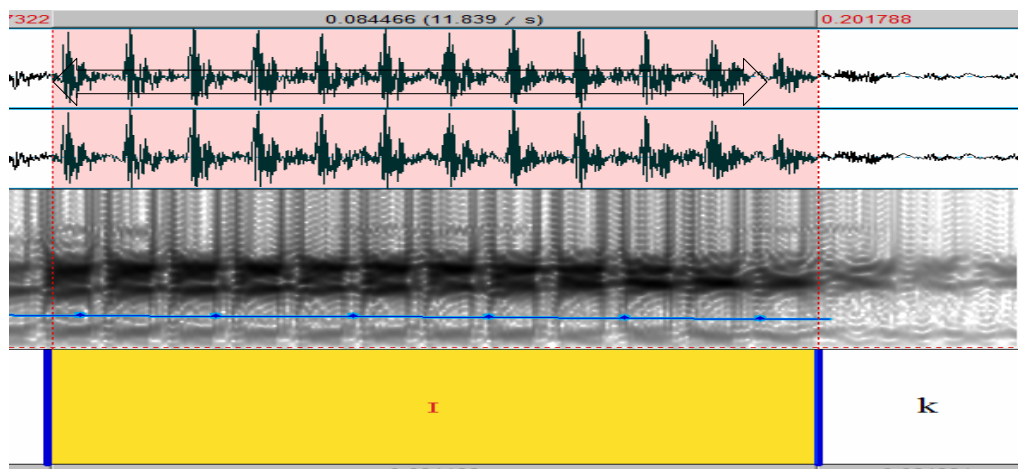
Picture 4.8 Spectrogram of Syllable Sit

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **sit** is voiceless, and this would clip the duration of the preceding vowel /i/. The vowel in **sit** measures 0.115/s. From this measures the syllable **sit** exposed pre-fortis clipping.

**Datum 9 :**

...we needed to pound **a stake**...

The above **stake** is written /steik/ phonemically. In the syllable **stake**, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



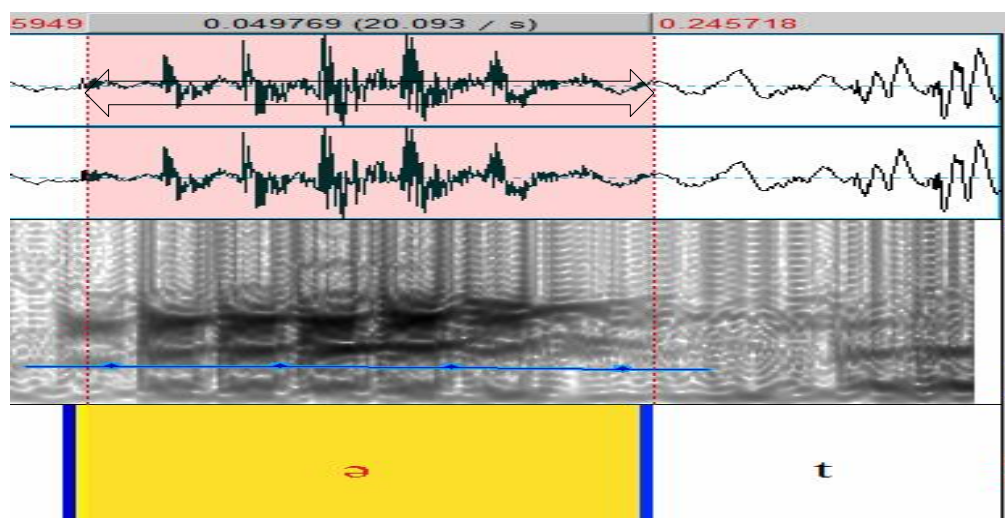
**Picture 4.9** Spectrogram of Syllable Stake

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **stake** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **stake** measures 0.084/s. From this measure it is called effect pre-fortis clipping.

**Datum 10 :**

... **but** just in case...

The above **but** is written /bʌt / phonemically. **But** has one syllable, containing vowel /ʌ/ before consonant /t/. In phonetic vowel /ʌ/ is one of lax vowel. The lax vowel /ʌ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



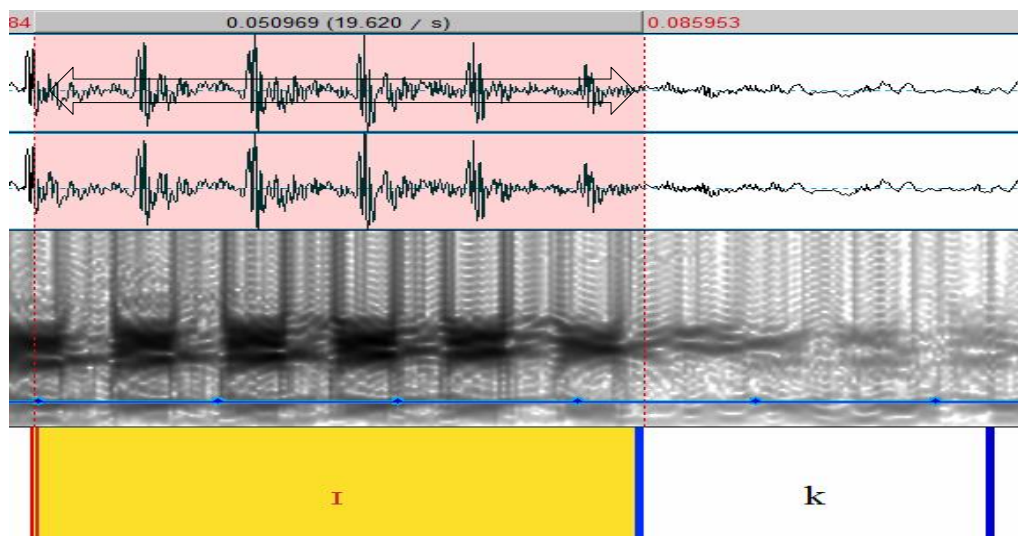
**Picture 4.10** Spectrogram of Syllable But

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **but** is voiceless, and this would clip the duration of the preceding vowel /ə/. The vowel in **but** measures 0.049/s. From this measures the syllable **but** exposed pre-fortis clipping.

### Datum 11 :

... a path to **make** those...(05:54)

The above **make** is written /meɪk/ phonemically. In the syllable **make**, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



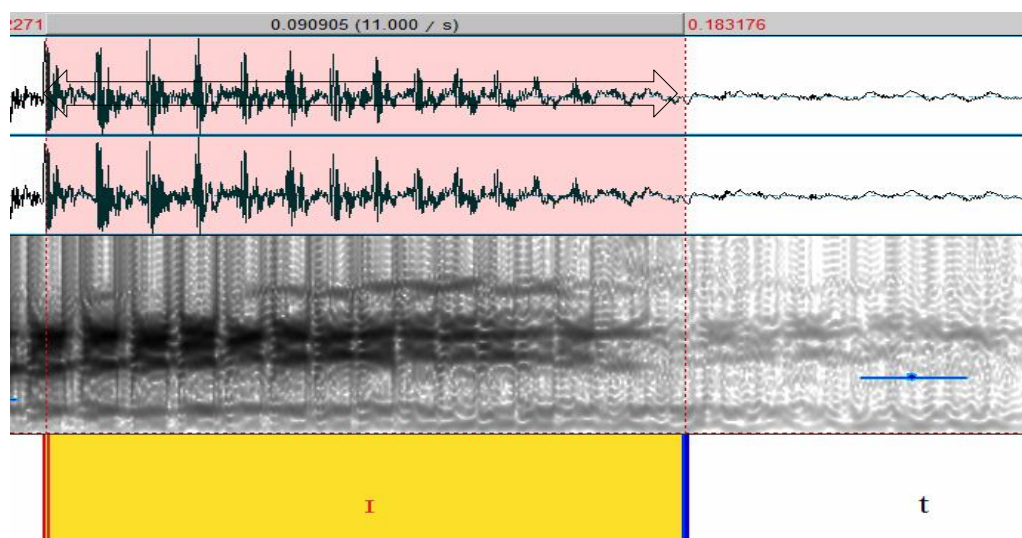
Picture 4.11 Spectrogram of Syllable Make

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **make** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **make** measures 0.050/s. From this measure it is called effect pre-fortis clipping.

**Datum 12 :**

... in the middle of the **night** with a vivid dream...(05:57)

The above **night** is written /nait/ phonemically. **Night** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



**Picture 4.12** Spectrogram of Syllable Night

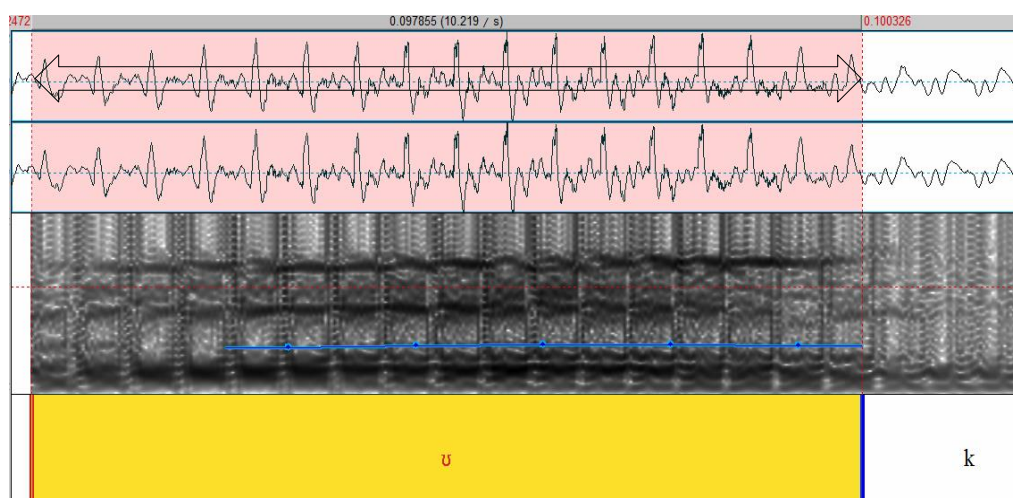


This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **night** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **night** measures 0.090/s. From this measures the syllable **night** exposed pre-fortis clipping.

### Datum 13 :

... When I suddenly **woke** up...(06:10)

The above **woke** is written /wəʊk/ phonemically. In the syllable **woke**, containing vowel /ʊ/ before consonant /k/. In phonetic vowel /ʊ/ is one of lax vowel. The lax vowel /ʊ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



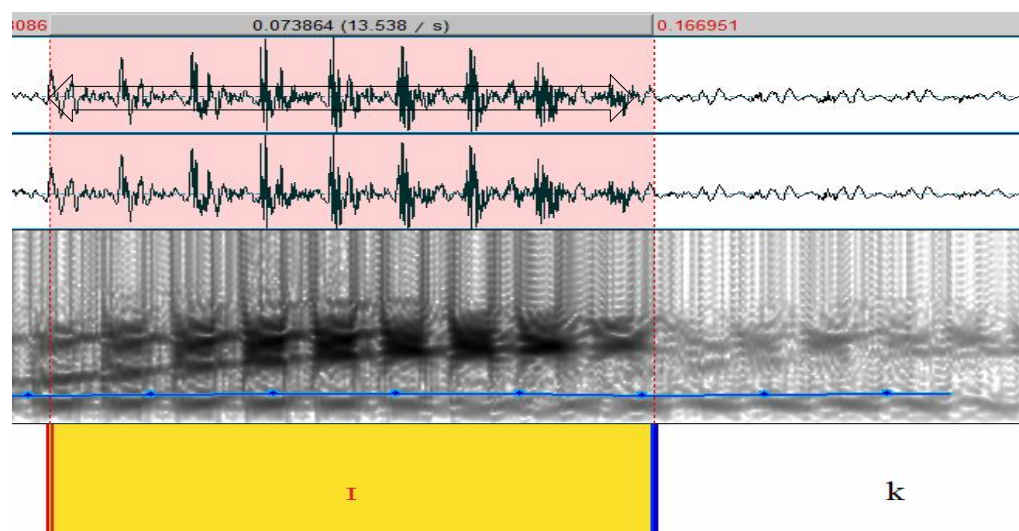
Picture 4.13 Spectrogram of Syllable Woke

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **woke** is voiceless, and this would clip the duration of the preceding vowel /ʊ/. The vowel in **woke** measures 0.097/s. From this measure it is called effect pre-fortis clipping.

#### Datum 14 :

... it is important to **wake** up...(06:21)

The above **wake** is written /weɪk/ phonemically. **Wake** has one syllable, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



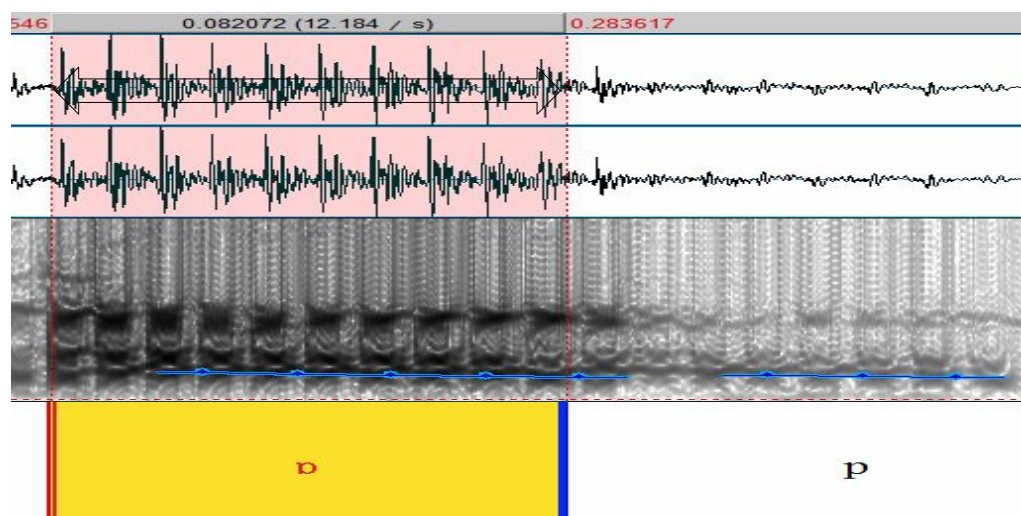
Picture 4.14 Spectrogram of Syllable Wake

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **wake** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **wake** measures 0.073/s. From this measures the syllable **wake** exposed pre-fortis clipping.

**Datum 15 :**

... and **stop** dreaming...(06:21)

The above **stop** is written /stɒp/ phonemically. In the syllable **stop**, containing vowel /ɒ/ before consonant /p/. In phonetic vowel /ɒ/ is one of lax vowel. The lax vowel /ɒ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /p/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



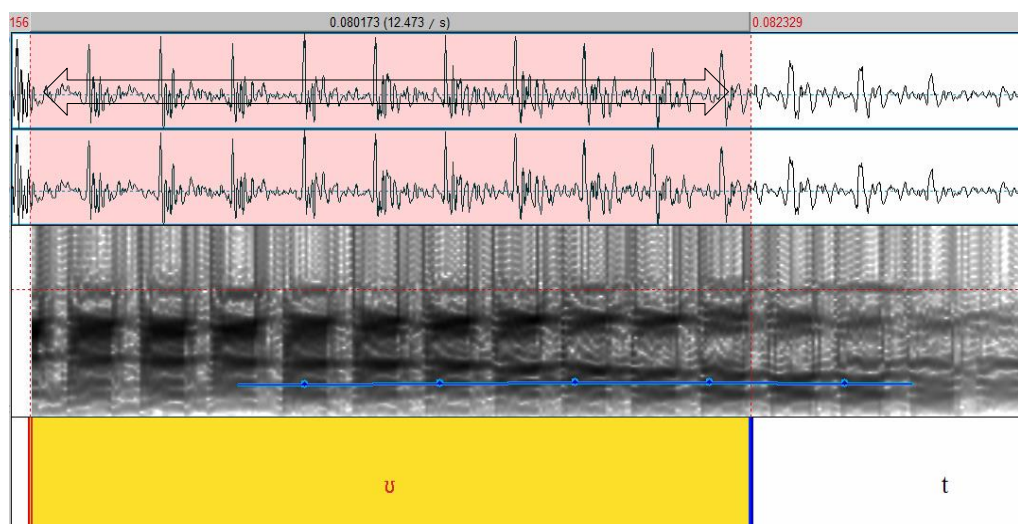
**Picture 4.15** Spectrogram of Syllable Stop

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /p/ in **stop** is voiceless, and this would clip the duration of the preceding vowel /ʊ/. The vowel in **stop** measures 0.082/s. From this measure it is called effect pre-fortis clipping.

**Datum 16 :**

... that night scribbling **out**...(06:25)

The above **out** is written /aʊt/ phonemically. Out has one syllable, containing vowel /ʊ/ before consonant /t/. In phonetic vowel /ʊ/ is one of lax vowel. The lax vowel /ʊ/ occur in closed syllable. Vowel form behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



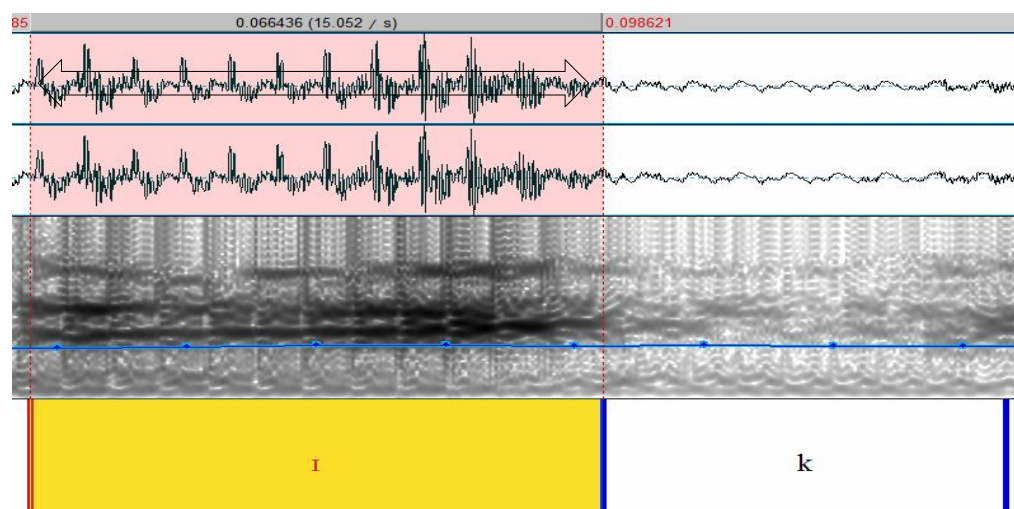
**Picture 4.16** Spectrogram of Syllable Out

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the praat programme, the syllable final /t/ in **out** is voiceless, and this would clip the duration of the preceding vowel /ʊ/. The vowel in **out** measures 0.080/s. From this measures the syllable **out** exposed pre-fortis clipping

**Datum 17 :**

... it would **take** a couple of...(06:33)

The above **take** is written /teɪk/ phonemically. In the syllable **take**, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



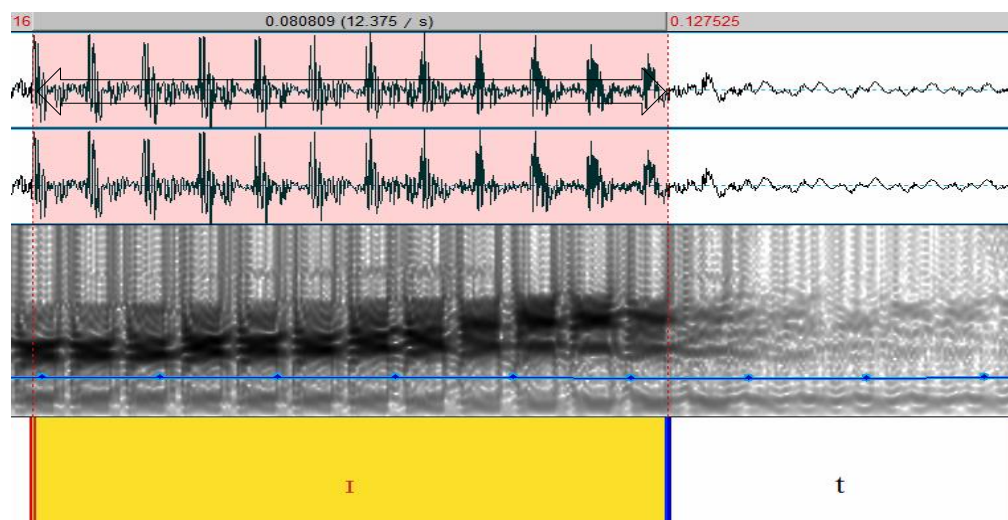
**Picture 4.17** Spectrogram of Syllable Take

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **take** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **take** measures 0.066/s. From this measure it is called effect pre-fortis clipping.

**Datum 18 :**

... a really **great** search engine...(06:59)

The above **great** is written /gret/ phonemically. **Great** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



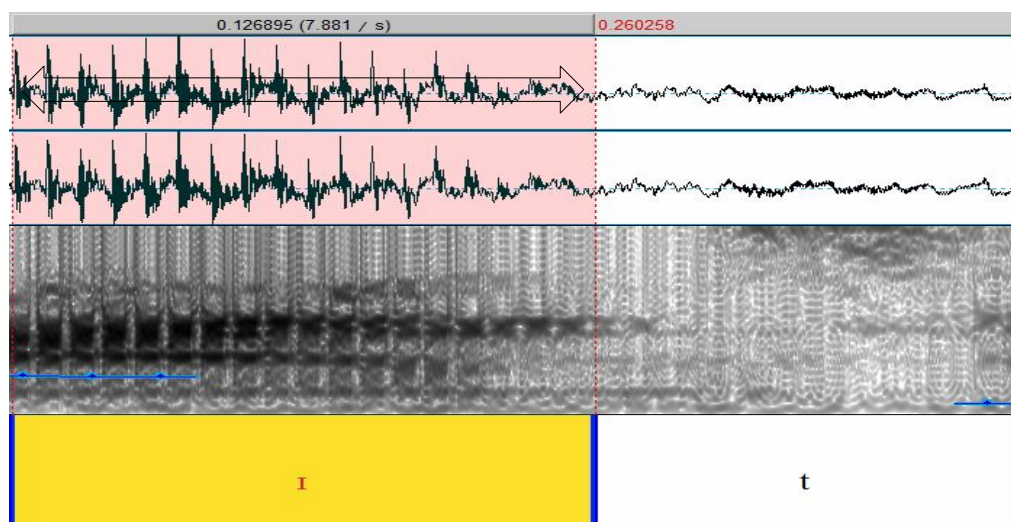
**Picture 4.18** Spectrogram of Syllable Great

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **great** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **great** measures 0.080/s. From this measures the syllable **great** exposed pre-fortis clipping.

### Datum 19 :

... personal rapid **transit** system...(07:44)

The above **transit** is written /trænzɪt/ phonemically. In the syllable **transit**, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



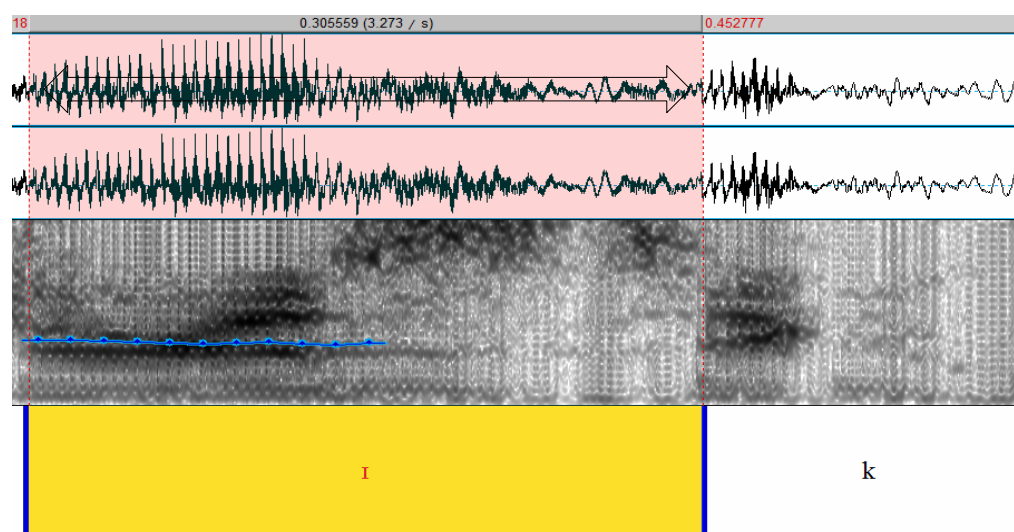
Picture 4.19 Spectrogram of Syllable Transit

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **transit** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **transit** measures 0.216/s. From this measure it is called effect pre-fortis clipping.

#### Datum 20 :

... It was a **futuristic** way of solving...(07:53)

The above **futuristic** is written /fju:tʃə'ɪstɪk/ phonemically. **Futuristic** has one syllable, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel form behaviour can affect not only the steady state of a consonant structure but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



**Picture 4.20** Spectrogram of Syllable Futuristic

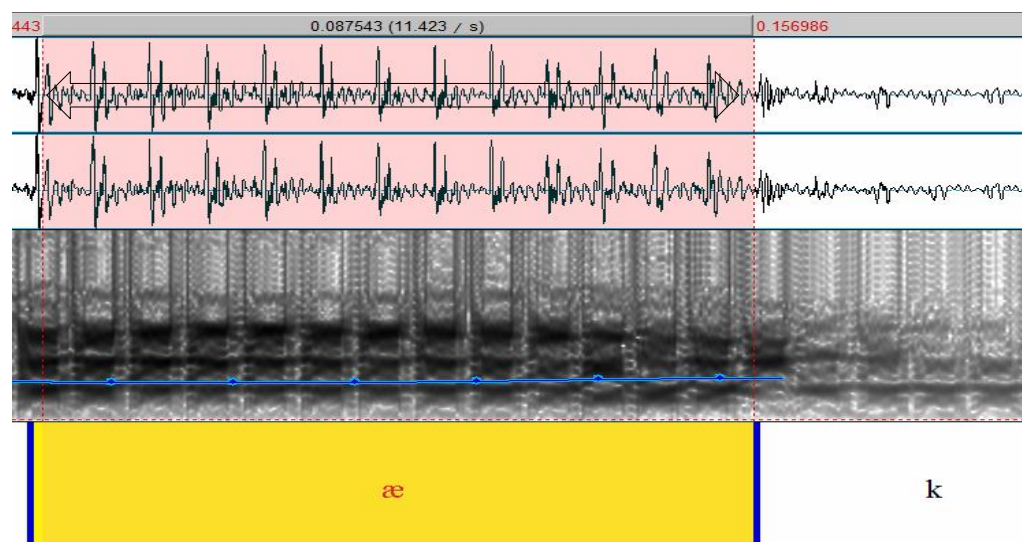


This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **futuristic** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **futuristic** measures 0.305/s. From this measures the syllable **futuristic** exposed pre-fortis clipping.

### Datum 21 :

... travel as if they are **pack** dogs...(08:42)

The above **pack** is written /pæk/ phonemically. In the syllable **pack**, containing vowel /æ/ before consonant /k/. In phonetic vowel /æ/ is one of lax vowel. The lax vowel /æ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



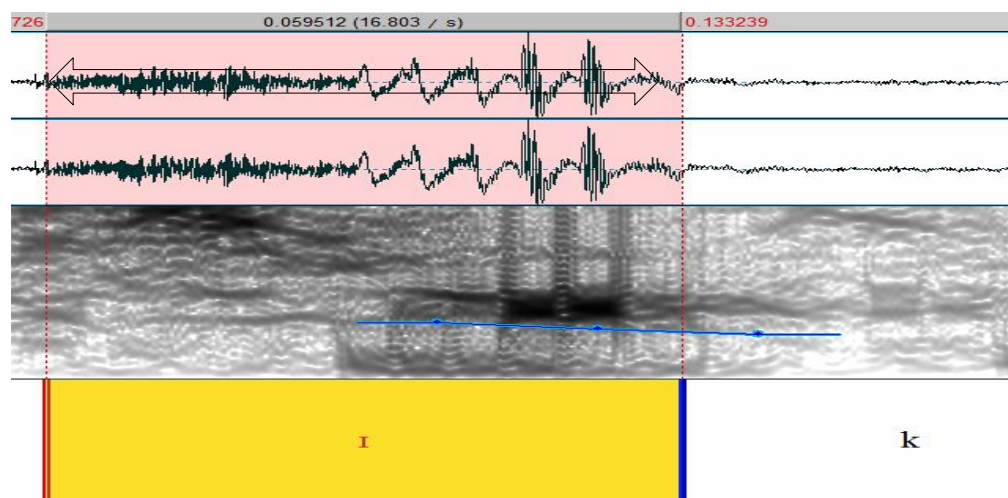
Picture 4.21 Spectrogram of Syllable Pack

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **pack** is voiceless, and this would clip the duration of the preceding vowel /æ/. The vowel in **pack** measures 0.087/s. From this measure it is called effect pre-fortis clipping.

### Datum 22 :

... and **stick** to each other...(08:43)

The above **stick** is written /stɪk/ phonemically. **Stick** has one syllable, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



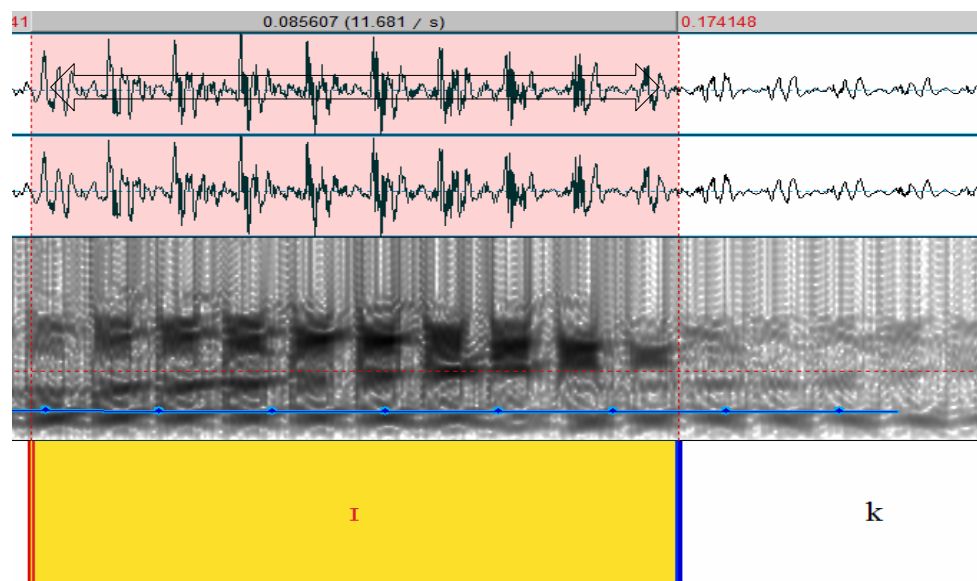
Picture 4.22 Spectrogram of Syllable Stick

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the praat programme, the syllable final /k/ in **stick** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **stick** measures 0.059/s. From this measures the syllable **stick** exposed pre-fortis clipping.

### Datum 23 :

... each other **like** glue...(08:44)

The above **like** is written /laɪk/ phonemically. In the syllable **like**, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



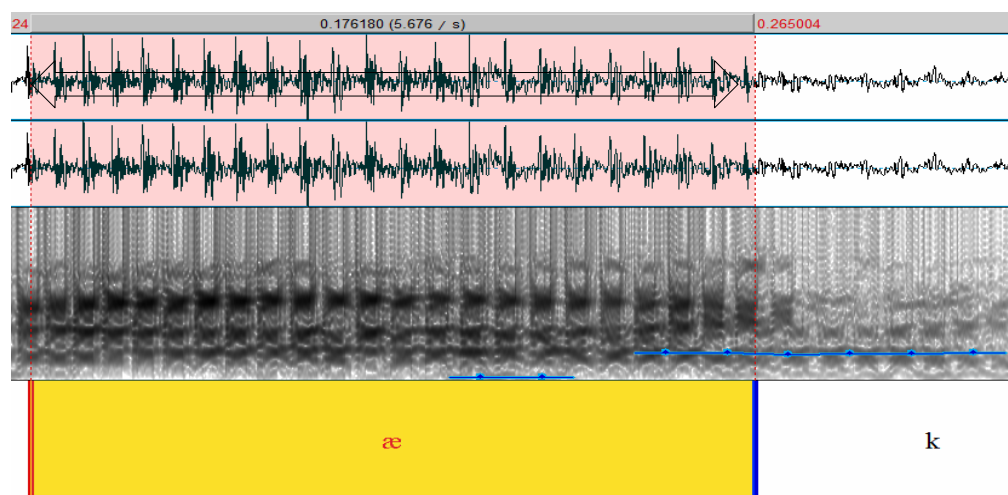
Picture 4.23 Spectrogram of Syllable Like

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using praat above, the syllable final /k/ in **like** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **like** measures 0.085/s. From this measures it is called effect pre-fortis clipping.

#### Datum 24 :

... on the right **track** if you...(09:17)

The above **track** is written /træk/ phonemically. **Track** has one syllable, containing vowel /æ/ before consonant /k/. In phonetic vowel /æ/ is one of lax vowel. The lax vowel /æ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



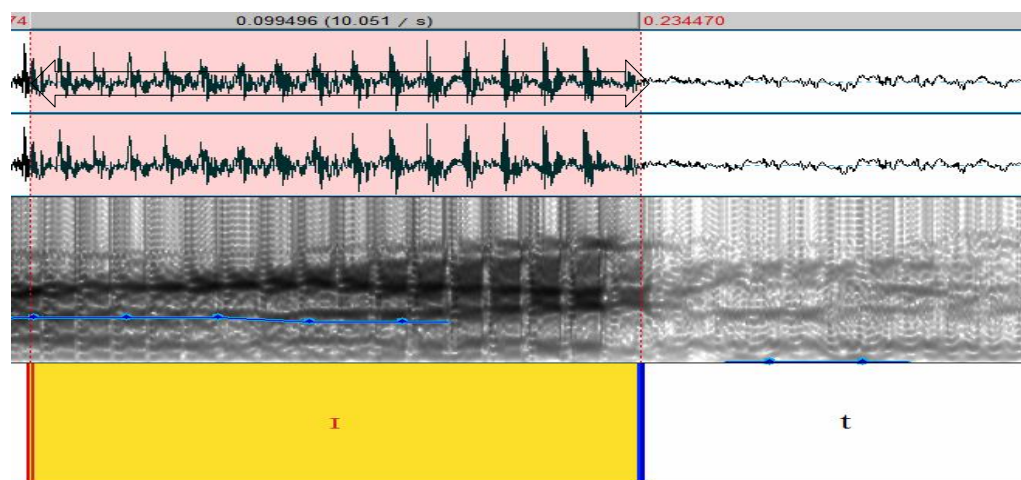
Picture 4.24 Spectrogram of Syllable Track

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **track** is voiceless, and this would clip the duration of the preceding vowel /æ/. The vowel in **track** measures 0.176/s. From this measures the syllable **track** exposed pre-fortis clipping.

### Datum 25 :

... three **credit** cards buying...(09:26)

The above **credit** is written /kredit/ phonemically. In the syllable **credit**, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



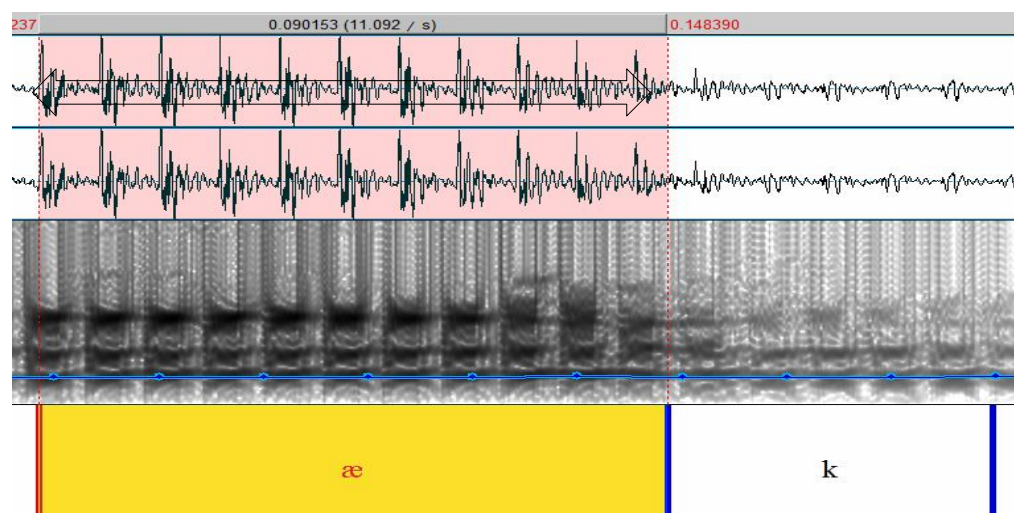
Picture 4.25 Spectrogram of Syllable Credit

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using praat above, the syllable final /t/ in **credit** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **credit** measures 0.099/s. From this measures it is called effect pre-fortis clipping.

### Datum 26 :

... hard disks off the **back**...(09:27)

The above **back** is written /bæk/ phonemically. **Back** has one syllable, containing vowel /æ/ before consonant /k/. In phonetic vowel /æ/ is one of lax vowel. The lax vowel /æ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



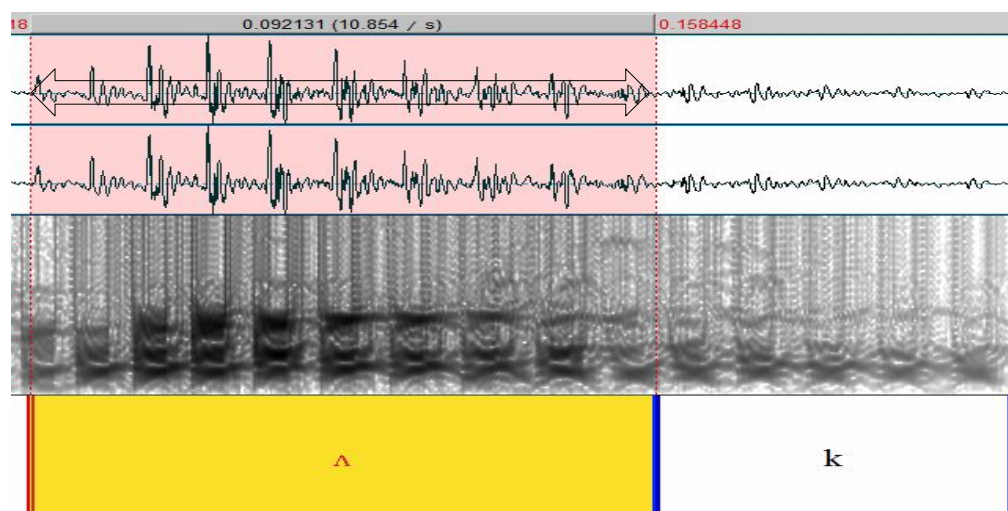
Picture 4.26 Spectrogram of Syllable Back

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **back** is voiceless, and this would clip the duration of the preceding vowel /æ/. The vowel in **back** measures 0.090/s. From this measures the syllable **back** exposed pre-fortis clipping.

**Datum 27 :**

... disks off the back of a **truck**...(09:28)

The above **truck** is written /trʌk/ phonemically. In the syllable **truck**, containing vowel /ʌ/ before consonant /k/. In phonetic vowel /ʌ/ is one of lax vowel. The lax vowel /ʌ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



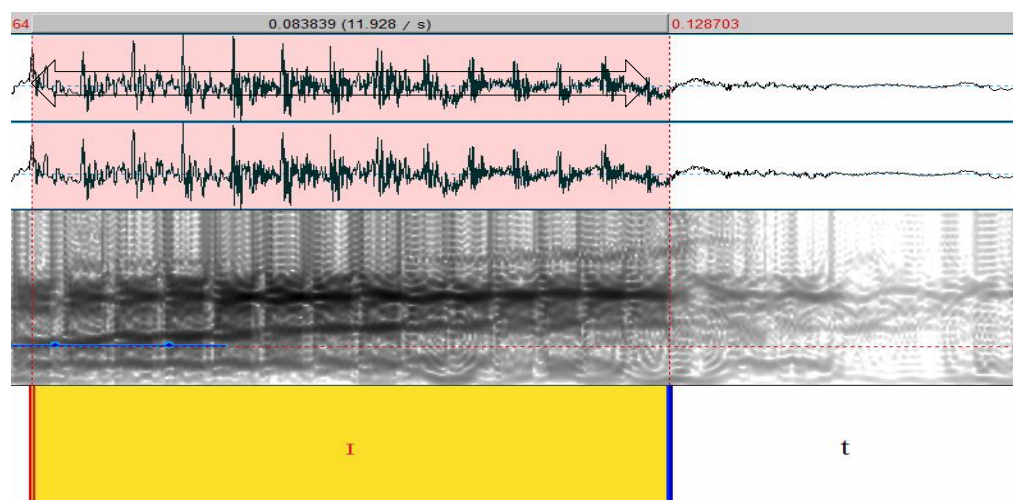
**Picture 4.27** Spectrogram of Syllable Truck

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **truck** is voiceless, and this would clip the duration of the preceding vowel /ʌ/. The vowel in **truck** measures 0.092/s. From this measures the syllable **truck** exposed pre-fortis clipping.

#### Datum 28 :

... you **might** feel exhilarated...(10:55)

The above **might** is written /maɪt/ phonemically. **Might** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



Picture 4.28 Spectrogram of Syllable Might

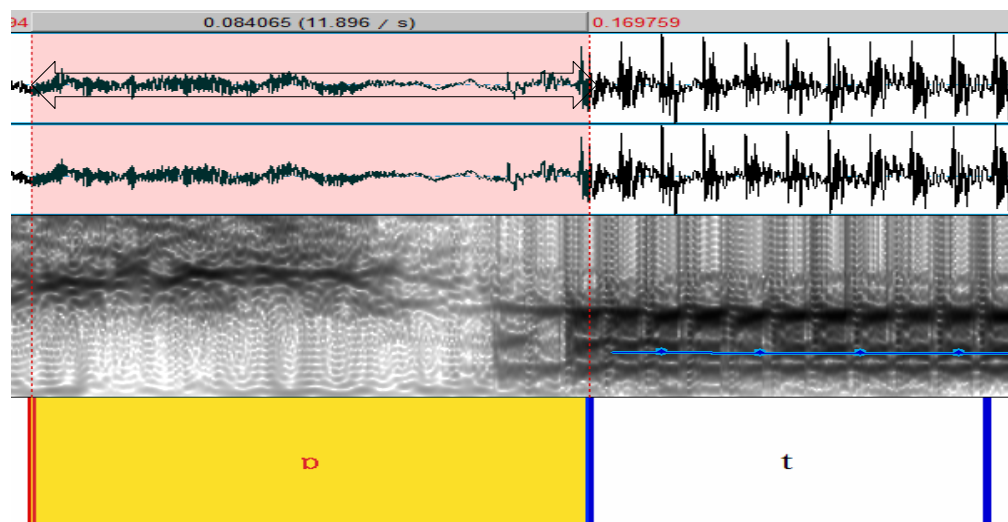


This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **might** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **might** measures 0.083/s. From this measures the syllable **might** exposed pre-fortis clipping.

**Datum 29 :**

... like you've just been **shot**...(10:57)

The above **shot** is written /ʃɒt/ phonemically. In the syllable **shot**, containing vowel /ɒ/ before consonant /t/. In phonetic vowel /ɒ/ is one of lax vowel. The lax vowel /ɒ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



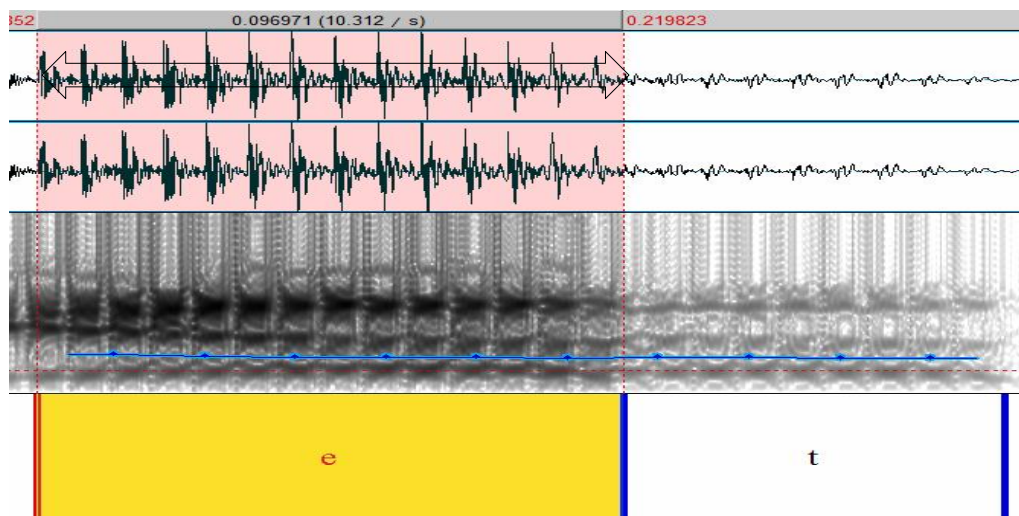
**Picture 4.29** Spectrogram of Syllable Shot

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using praat above, the syllable final /t/ in **shot** is voiceless, and this would clip the duration of the preceding vowel /ɒ/. The vowel in **shot** measures 0.084/s. From this measures it is called effect pre-fortis clipping.

**Datum 30 :**

... Don't ever **forget** that incredible feeling...(11:02)

The above **forget** is written /fə'get/ phonemically. **Forget** has one syllable, containing vowel /e/ before consonant /t/. In phonetic vowel /e/ is one of lax vowel. The lax vowel /e/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



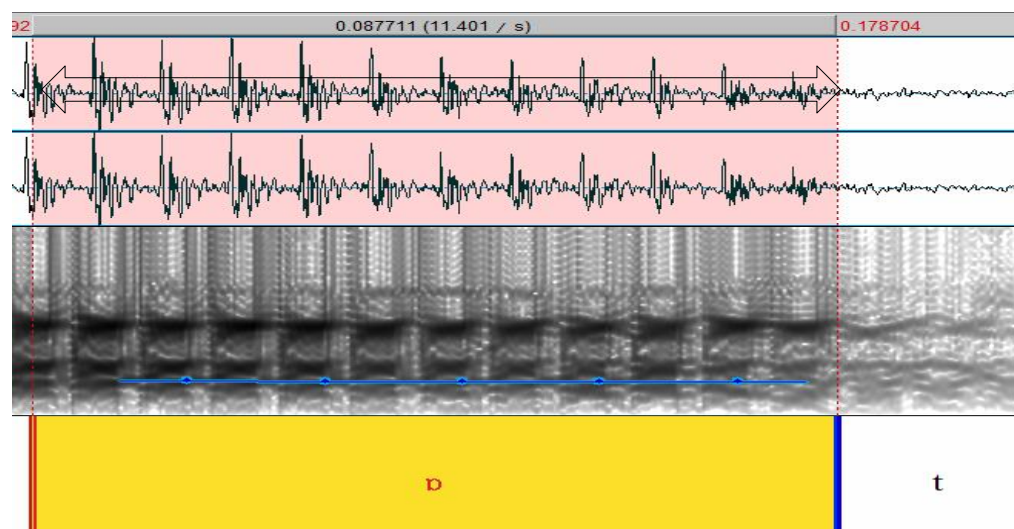
**Picture 4.30** Spectrogram of Syllable Forget

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **forget** is voiceless, and this would clip the duration of the preceding vowel /e/. The vowel in **forget** measures 0.096/s. From this measures the syllable **forget** exposed pre-fortis clipping

### Datum 31 :

... in a steaming **hot** village...(11:55)

The above **hot** is written /hɒt/ phonemically. In the syllable **hot**, containing vowel /ɒ/ before consonant /t/. In phonetic vowel /ɒ/ is one of lax vowel. The lax vowel /ɒ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



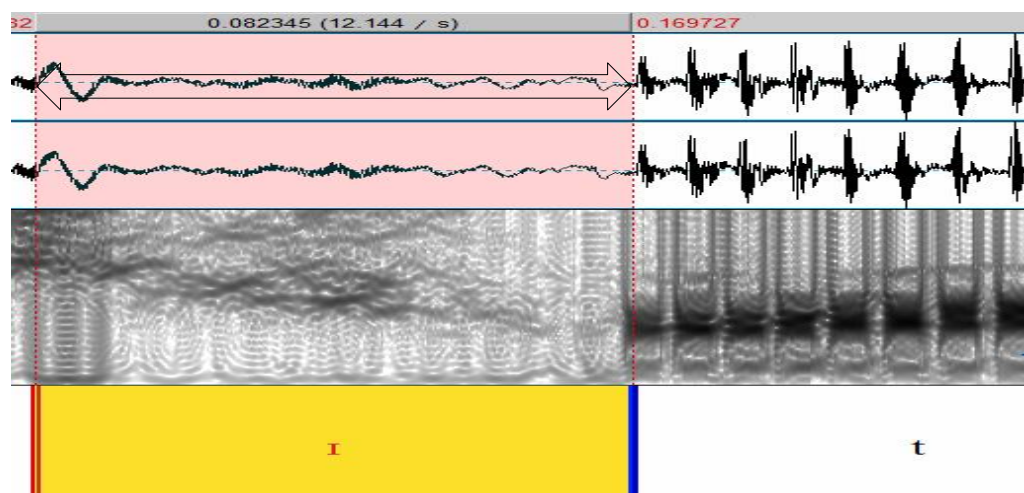
Picture 4.31 Spectrogram of Syllable Hot

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **hot** is voiceless, and this would clip the duration of the preceding vowel /ɒ/. The vowel in **hot** measures 0.087/s. From this measure it is called effect pre-fortis clipping.

**Datum 32 :**

... the open gutter and **straight** into...(12:08)

The above **straight** is written /stret/ phonemically. **Straight** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



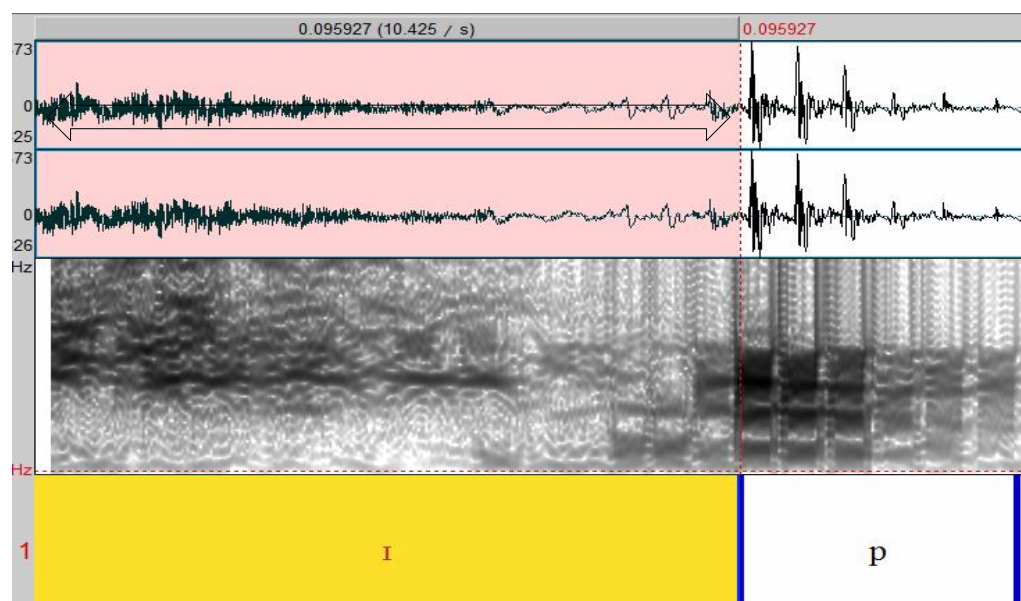
**Picture 4.32** Spectrogram of Syllable Straight

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the praat programme, the syllable final /t/ in **straight** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **straight** measures 0.082/s. From this measures the syllable **straight** exposed pre-fortis clipping

### Datum 33 :

... He went on a **trip** to Tennessee...(12:32)

The above **trip** is written /trɪp/ phonemically. In the syllable **trip**, containing vowel /ɪ/ before consonant /p/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /p/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



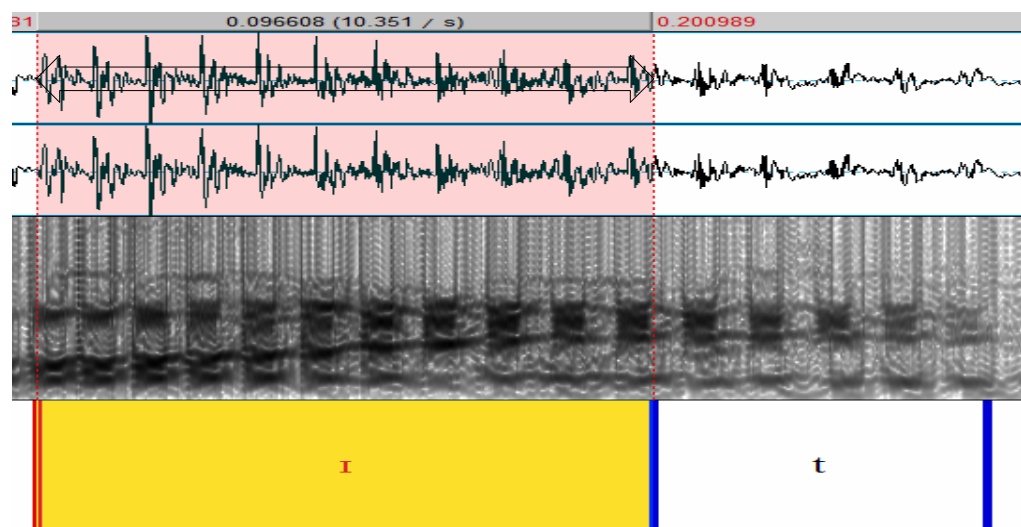
Picture 4.33 Spectrogram of Syllable Trip

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /p/ in **trip** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **trip** measures 0.095/s. From this measure it is called effect pre-fortis clipping.

#### Datum 34 :

... his first **flight** my dad wrote...(12:33)

The above **flight** is written /flaɪt/ phonemically. **Flight** has one syllable, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



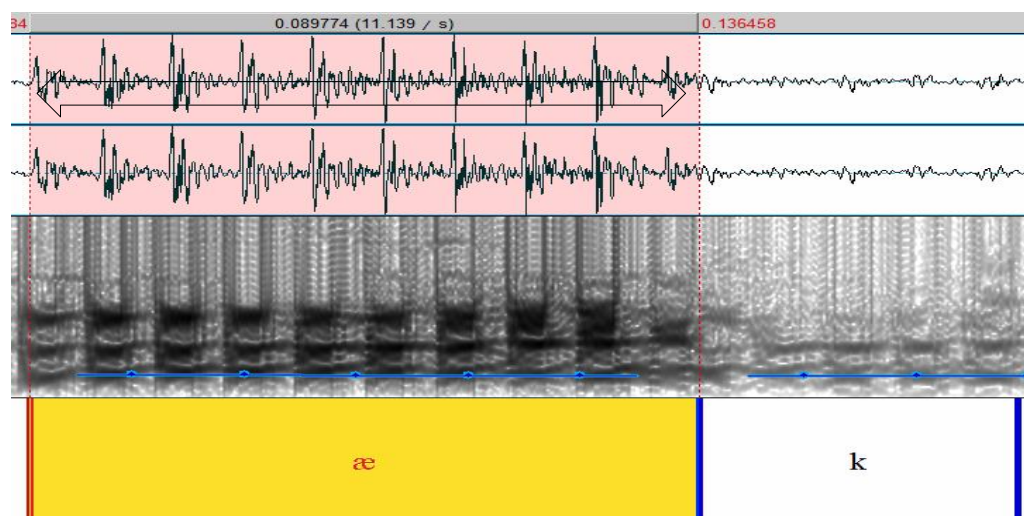
Picture 4.34 Spectrogram of Syllable Flight

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /t/ in **flight** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **flight** measures 0.096/s. From this measures the syllable **flight** exposed pre-fortis clipping.

**Datum 35 :**

... before I started **back** to school...(12:40)

The above **back** is written /bæk/ phonemically. In the syllable **back**, containing vowel /æ/ before consonant /k/. In phonetic vowel /æ/ is one of lax vowel. The lax vowel /æ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



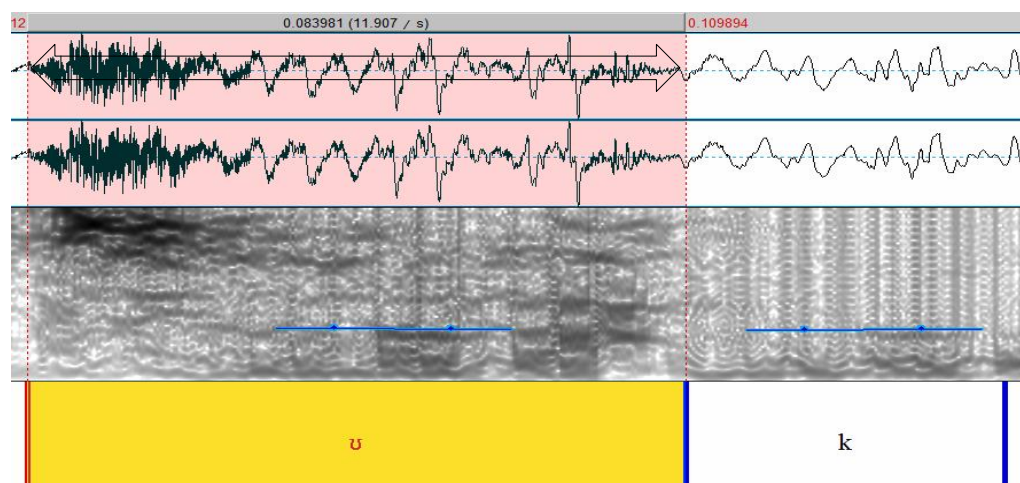
**Picture 4.35** Spectrogram of Syllable Back

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /k/ in **back** is voiceless, and this would clip the duration of the preceding vowel /æ/. The vowel in **back** measures 0.089/s. From this measure it is called effect pre-fortis clipping.

**Datum 36 :**

... Polio are what **took** him from...(12:59)

The above **took** is written /tʊk/ phonemically. **Took** has one syllable, containing vowel /ʊ/ before consonant /k/. In phonetic vowel /ʊ/ is one of lax vowel. The lax vowel /ʊ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



**Picture 4.36** Spectrogram of Syllable Took

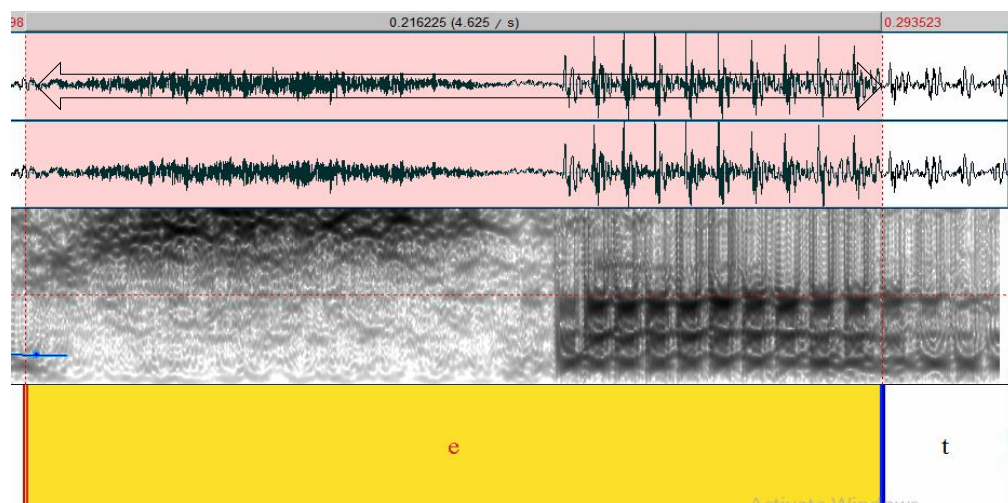


This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **took** is voiceless, and this would clip the duration of the preceding vowel /ʊ/. The vowel in **took** measures 0.083/s. From this measures the syllable **took** exposed pre-fortis clipping.

**Datum 37 :**

... very **upset** that Polio still...(13:02)

The above **upset** is written /ʌpset/ phonemically. In the syllable **upset**, containing vowel /e/ before consonant /t/. In phonetic vowel /e/ is one of lax vowel. The lax vowel /e/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



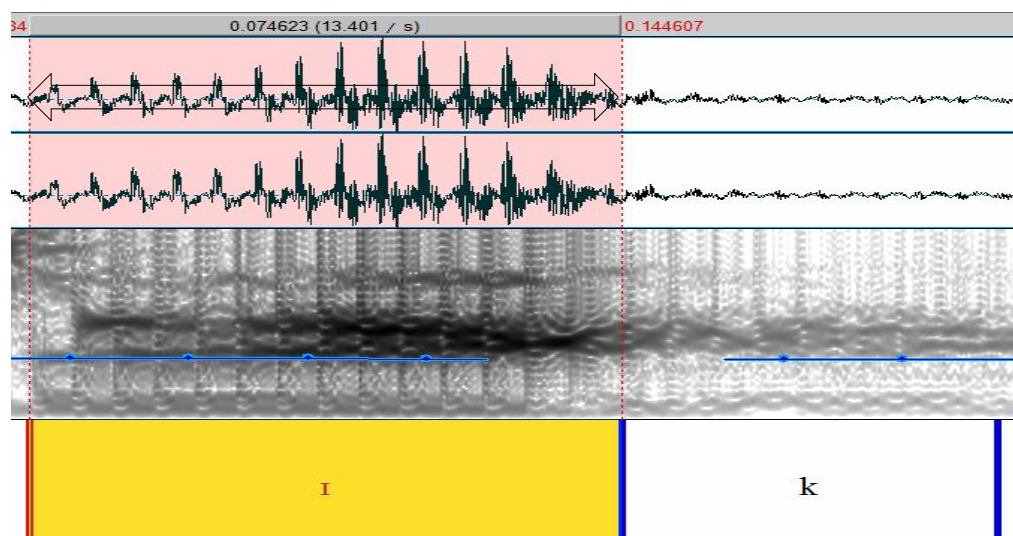
**Picture 4.37** Spectrogram of Syllable Upset

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using praat above, the syllable final /t/ in **upset** is voiceless, and this would clip the duration of the preceding vowel /e/. The vowel in **upset** measures 0.216/s. From this measures it is called effect pre-fortis clipping.

**Datum 38 :**

... we shall **take** part in...(14:16)

The above **take** is written /teɪk/ phonemically. **Take** has one syllable, containing vowel /ɪ/ before consonant /k/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /k/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



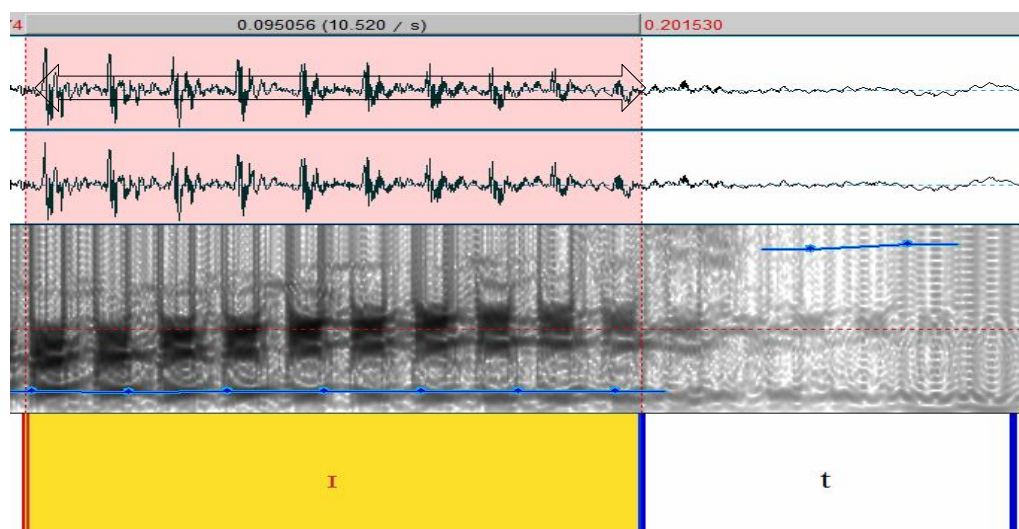
**Picture 4.38** Spectrogram of Syllable Take

This shortening of the vowel (clipping) does not take place when the consonant is voiced. The data analysis in the Praat programme, the syllable final /k/ in **take** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **take** measures 0.074/s. From this measures the syllable **take** exposed pre-fortis clipping.

**Datum 39 :**

... be even more **bright** than it is today."...(14:38)

The above **bright** is written /brɪt/ phonemically. In the syllable **bright**, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowel. The lax vowel /ɪ/ occur in closed syllable. Vowel fold behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



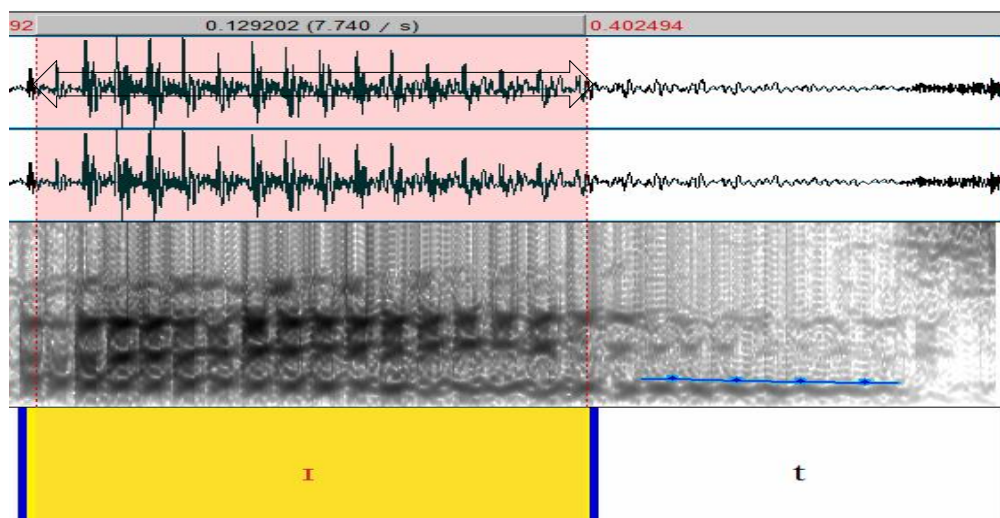
**Picture 4.39** Spectrogram of Syllable Bright

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectrogram using Praat above, the syllable final /t/ in **bright** is voiceless, and this would clip the duration of the preceding vowel /ɪ/. The vowel in **bright** 0.095/s. From this measure it is called effect pre-fortis clipping.

**Datum 40 :**

... Dad was so full of **insight**, of excitement."...(15:06)

The above **insight** is written /ɪnsaɪt/ phonemically. **Insight** has two syllables, containing vowel /ɪ/ before consonant /t/. In phonetic vowel /ɪ/ is one of lax vowels. The lax vowel /ɪ/ occurs in closed syllables. Vowel form behaviour can affect not only the steady state of a consonant stricture but also the approach to that position and the period immediately following it. When the syllable is closed by a fortis consonant /t/, so the vowel is appreciably shorter in duration. This shortening of vowel duration is triggered by the voicelessness of the following consonant.



**Picture 4.40** Spectrogram of Syllable Word Insight

This shortening of the vowel (clipping) does not take place when the consonant is voiced. By the spectorgam using praat above The data analysis in the praat programme The data analysis in the praat programme, the syllable final /t/ in **insight** is voiceless, and this would clip the duration of the preceding vowel /i/. The vowel in **insight** measures 0.129/s. From this measures the syllable **insight** exposed pre-fortis clipping..

### C. Interpretation of the Research Finding

According to the data analyses which have been analyzed in the Lary Page Speech, found forty word that contain pre fortis clipping of /p/,/t/,/k/ phonemes. Phoneme /p/ consist of two data, phonem /t/ consist twenty three data, and phonem /k/ consist fifteen data. The interpretation of datais formed in the following table.

**Table 4.2** Pre-Fortis Clipping of the Research Findings

No	Pre-Fortis Clipping of Plosive Phonemes	Total Founded	Percentage
1	/p/	2	5 %
2	/t/	23	57.5 %
3	/k/	15	37.5 %
TOTAL		40	100 %

The Result Of The Pre Fortis Clipping of the /p,t,k/ phonems according to the data analyses which had been analyzed in the Lary Pages Speech.The

writer found “forty” words that contain pre fortis clipping of plosive phonemes /p/ /t/ /k/. The interpretation of the data is formed in the following table. From the data on the table above, it shows that in the Lary Pages Speech “forty” words. The first writer found plosive phonemes /t/ contains “twenty three” words with percentage (57.5%), the second plosive phonemes /p/ contain “two” words with percentage (5%), and the third of plosive phonemes /k/ contains “fifteen” words with percentage (37.5%).

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### A. CONCLUSION

This research addresses three primary objectives of the study to explain the process of pre-fortis clipping of /p/,/t/,/k/ phonemes , to identify position of pre-fortis clipping phonemes /p/,/t/,/k/, and to know mostly phoneme /p/,/t/,/k/ appears in Lary Pages speech. It can be concluded that there are pre-fortis clipping of /p/,/t/,/k/ found in the Lary Pages speech.

1. The process of pre-fortis happened when the articulation of vowels before consonants. It can be shown that vowels are produced shorter ('clipped') if followed by fortis/voiceless consonants within the same syllable.
2. To identify the pre-fortis clipping of /p/,/t/,/k/.
  - a. Phoneme /p/ is voiceless bilabial, for phoneme /p/ can occurred when glottal reinforcement in syllable-final position before a consonant or silence, or phoneme /p/ unreleased in syllable-final position before a consonant; Optional before silence.
  - b. Phoneme /t/ is voiceless alveolar, for phoneme /t/ can occurred when glottal reinforcement in syllable-final position before a consonant or silence, or phoneme /t/ unreleased in syllable-final position before a consonant; Optional before silence.
  - c. Phoneme /k/ is voiceless velar, for phoneme /k/ can occurred when glottal reinforcement in syllable-final position before a consonant or

silence, or phoneme /k/ unreleased in syllable-final position before a consonant ; Optional before silence.

3. The most pre fortis clipping of /p/,/t/,/k/ found in the speech is phoneme /t/ with fifty seven point five, phonem /k/ with fifteen, and the phoneme /p/ with five pcentage

Then, from the analysis can be taken the implicit conclusion that pre-fortis clipping can be happened in stress syllabe that contain the lax vowel, pre-fortis clipping occurred when the vowel possition before plosive consonan. Pre-fortis clipping is needed to speak easier, simpler, and more like native speakers but requires ability to understand in listening it. The important things from this research are the knowledge of the phonemically written and classification of sound must be priority.

## **B. SUGGESTION**

After analyzing and giving conclusion of analysis pre fortis clipping of /p/,/t/,/k/ phoneme in Lary Pages Speech, finally, the scientific paper has come to the last paragraph. In this last chapter, the writer would like to suggest the readers related to this paper. The writer made suggestion not only for student but also for lecture oand general readers.

For the student who study linguistics, especially phonetic and phonology. It is expected to have a good pronunciation and understan where the sound is resulted. Not only say the word but also understand how the word has its



pronunciation. It can help the student more understand about the way how to say the word correctly.

For the lecturer who teach linguistic, it can be helpful to share the student. Some example about the correct pronunciation and how they can differ the sound resulted by pre fortis clipping happened in each world. It also can be an assessment for the students to do some research about it.

Then, for general readers who interested in linguistic. It will help them to analyze the pre fortis clipping of /p/,/t/,/k/, and how they are able to have a good pronunciation. It also can help for the next researcher who would like to take another research about pre fortis clipping and which can be found in speech.

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## **BIOGRAPHY**



The writer was born in Jakarta on 02 June 1991, his mother is Maryati and father is Djuanda. She is first daughter in her family and educated in Mangun Jaya 01 Elementry School in 1997. She continued studying to PGRI South Tambun Junior High School. The writer took Multimedia when she was in SMKN 2 West Java Vocational High School in 2006.

After Graduate from Vocational High School, the writer worked in PT. Toyo Denso Indonesia for four years. She applied requirements to PT. O Well Indonesia. In 2012, she was accepted as purchasing administration until February 2018. In 2014, the writer decided to continue her study of English and joined the School of Foreign Languages – JIA Bekasi at English Department.