EFFECTS OF LESSAC KINESENSIC TRAINING ON VOCAL EXPRESSION AND INTELLIGIBILITY AMONG UNDERGRADUATE ACTORS IN SOUTHWESTERN NIGERIA

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CERTIFICATION

I certify that this study was carried out by Abimbola Adetola BENSON, Matriculation number 103222, in the Department of Theatre Arts, University of Ibadan, under my supervision.

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DEDICATION

This thesis is dedicated to the loving memory of Late Nurudeen Koleola Omolofin Benson (NKOB), my living legend mother, Mrs. Bilikisu Aramide Benson, and to my son "Angel" Nathanael Oluwajisola Stephen-Adesina (NOSA).

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ABSTRACT

Vocal pedagogy is a comprehensive training in voice, speech, body and mind. Globally, there is an increasing acceptance of Lessac Kinesensic Training (LKT) among vocal practitioners as an all-encompassing pedagogy. However, literature on vocal pedagogy in Nigeria has concentrated on training on speech with little emphasis on voice, body and mind. This study was, therefore, designed to determine the effects of LKT among undergraduate actors in southwestern Nigeria, with a view to improving their intelligibility and vocal expression. The moderating effects of years of actor training and first language were also examined.

Aaron Temkin Beck's Cognitive Behavioural Therapy and Gunnar Fant's Source Filter Theory were adopted as framework. The pretest-posttest control group quasi-experimental research design was adopted. Two first generation universities offering reputable acting programmes: University of Ibadan, Ibadan (UI) and Obafemi Awolowo University, Ile-Ife (OAU) were purposively selected. Seventeen 300 (13) and 400 (four) level undergraduate actors were enumerated. Participants were randomly assigned to LKT (10) and control (seven) groups. Five LKT principles (The Human "Musical Instrument", Inner Harmonic Sensing, Perceptive Awareness, De-Patterning and Feedback) and two energies (Vocal and Body) were observed during treatment. The treatment lasted eight weeks. The instruments used were instructional guides, three sub-scales of Knowledge of Vocal Training Scale (r=0.81), Undergraduate Actors Intelligibility Scale (r=0.76) and Vocal Expression Scale (r=0.86). This was complemented with discussions involving all the participants for the feedback principle. Quantitative data were analysed using descriptive statistics, Analysis of Covariance and estimated marginal mean at 0.05 level of significance, while qualitative data were analysed perceptually and acoustically.

The participants' age was 24.50±2.60 years, and females were 70.6%. There were significant main effect of treatment on vocal expression [$F_{(1,12)}$=24.86; partial η^2=0.07] and intelligibility [$F_{(1,12)}$=10.09; partial η^2=0.08] among the participants. The treatment group exhibited higher vocal expression ($\bar{x}$ = 44.00) and intelligibility ($\bar{x}$ = 32.90), while the control group recorded lower vocal expression ($\bar{x}$ = 32.14) and intelligibility ($\bar{x}$ = 23.29). The main effects of years of training on vocal expression and intelligibility were not significant. Also, the main effects of first language on vocal expression and intelligibility were not significant. The two-way and three-way interaction effects of treatment, first language and years of training on vocal expression and intelligibility were not significant. Participants who received acoustic, perceptual and body measurement modules of the LKT reported better outcomes in vocal expression and intelligibility.

Lessac kinesensic training enhanced the vocal expression and intelligibility among undergraduate actors in Southwestern Nigeria. A home-grown version of the pedagogy should therefore be incorporated into the curriculum for undergraduate actors across Nigeria regardless of years of actors training experience and first language.

Keywords: Lessac kinesensic training, Vocal training in Nigeria, Undergraduate actors
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CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Every discipline has a common goal and the goal, when carried out conscientiously, yields great results. Actors training from different pedagogical views have common goals that are evident, achieved or attained at different times depending on the willingness of the actor in training. Corrigan (1997) expresses that the prevalent objective of actor training, whether as a student or a professional, is the creation of an actor with good coordination and integration of voice, body and emotion. The combination of the energies in these tools will bring about an effortless and playful way in the expression of texts, regardless of the period, style, and location.

This training would often use the actor's physical, emotional and mental alertness to produce desired results. This event further describes the stimulus of the actor to equip himself in the realisation of the role. As the training proceeds towards improving the voice, body, and emotion, the actor must consider the shaping of her physical and emotional state to fit the character she intends to portray. Shewell (2009), in her description of the actor's voice is seen as a double psychosomatic phenomenon; influenced by the psyche of the speaker i.e., our personality and present feelings. It is clear here that just as the psyche and soma affect the actor's inner and outer environment, so do they affect the listeners' environment (Chekhov, 2002).

No matter how an actor appears on stage to the audience, there is the need to avoid poor performance of the body, voice, speech, and emotions to avoid a monotonous, tense, and hoarse voice that lacks rhythm and creates tension. The voice is the component that expresses all that the actor portrays before the audience. It demands rigorous retraining of

habitual patterns of speaking, posture, expression of emotions inside-out to an audience, because it is dynamic from culture to culture. This experience is universal and indeed as Linklater adds (2012:1)"…in every country of the world breath plays on vocal folds and becomes resonance...In every part of the world people feel emotions". However, distinct cultures form and regulate vocal and emotional expression in a multitude of ways, so that they can become communication that suit a particular culture. In, that, vocal training have become a profession, an art, that dating back to the ancient Greeks through oratorical skills, specifically, public speaking and have continued (Sansom, 2019) to gain attention up until the nineteenth century.

Vocal (voice) pedagogy since the nineteenth century to the new millennium and going forward, have developed various teachers of voice and speech to meet the demands and challenges of actors, singers and individuals who may be lawyers, public speakers, newscasters, radio presenters, politicians, teachers, religious leader etc., who employ the voice as a means of fulfilling the demands of their occupation. The evolution of teaching in theory and practice the beliefs and concerns that interplay within and between cultures, and individuals created a new profession for voice and speech training. There have been ongoing debates as to what focus should the teaching and training of the voice and speech for the speaking and singing voice be (Hampton, 1997). The focus of these teachers who later became voice instructors/pedagogues, has always been related to culture and occupation observed by Saklad (2011), and their challenges continue to shape and meet the growing demand for voice and speech performances.

Pedagogues around the global continue to develop principles training need to address. To this end, vocal training is accepted as one of the foundations in actor training processes putting to cognisance the culture and how the vocal apparatus are shaped. It is not static, it encapsulates different processes in character creations and the socioeconomic background, and actors have to be enthusiastic in learning and adjusting to different vocal creations, characters, accents, regardless of the approaches or pedagogies to deal with for the development of vocal and body dynamics. McAllister-Viel (2016:438) agrees that the tools of the actor are not stable as a result of the experiences that each actor has to deal

with. She states that in speech education as in Nigeria, there is a need to design an intercultural voice and speech curriculum by pedagogues and consideration should be given to the knowledge "of what a voice is, what it can/should do, and how voice can/should do it".

This, therefore, demands an embodied training style in voice as a vehicle for transmitting speech, breath, body, mind, and gesture. From culture to culture, the materials are changing especially the muscles, yet, meeting the demands of a craving audience for the message of the playwright through this vessel (body of the actor) has remained challenging. The training of voice and speech has been a long-term tradition and the primary aim is to be persuasive to the audience or listeners. Saklad (2011) thus describes voice and speech training as the structure for actor training to produce a convincing representation of a character in performance as well as public speakers like politicians, lawyers, clergymen and religious leaders.

The training of voice and speech (sometimes referred to as vocal training) is the integration of voice, body and emotion in a persuasive manner. One can captivate the audience and listener and it can be challenging for actors as a result of the rigorous training it usually entails. It may pose a threat to the actor if the vocal apparatus are misused, thereby refusing optimal functioning for character or diction creation like accent development. Undergraduate actors, on whom this study focuses, are usually not aware of the knowledge of their body which in clear words, a pedagogue describes as 'body wisdom': a term employed by a vocal pedagogue on Lessac Kinesensic – the use and training of the human body through a new organic/sensory learning process. Arthur Lessac proposes this vocal pedagogy which deviates from other existing vocal pedagogies described as artificial i.e. a trainer training a trainee's voice, speech, body, and mind in a forceful manner. This is so that actors can tap into their body wisdom, train the body and mind while feeding it in an organic way that is ongoing, emphasising the special types 'and' quality of physicalised inner knowledge, which affects ones' behaviour, attitudes and benefits, and the transmission of energy with our personal environment – an inner world all its own" (Lessac, 1997).

What can be deduced from the above is that there is some form of energy from the inward to the outward body which is not imitated or forceful that is effortlessly achieved – it is what the body and mind really yearn for and sometimes hope to achieve. This sensible judgment of the body and mind is what Lessac's work refers to as body wisdom. Bailey (2016) expresses that body wisdom encourages the performer or individual to know what is healthiest not only throughout her life, but also in vocal tone, pitch, joint, breath, and movement experimentations. Basically, it is not what an instructor informs her body but what her body senses as good. An example is when we sit in a bus, train, plane, or any mode of transport for long hours and finally arrive at our destination, or when we wake up from a long sleep, we are not told to yawn or stretch but our body knows what it wants – to loosen the tension and therefore we carry out the process of yawning and stretching.

Without adequate training on specific vocal development, actors very often dive deep into various acting pedagogies mechanically. Trying so hard to achieve a goal without patiently exploring, they often push too hard to aim at performance demands without an embodied approach; only to fall back to old habitual patterns. They are often ignorant of the benefits of the possible pedagogy (ies) in use for performance space and real life situations. What is often experienced is an "end-gaining" intellectual (cognitive) process and more of being conscious rather than being aware or a feeling (psychophysical) process which will be discussed extensively in the body of this study. However, there is an ideology that informs the physical, social and psychological development of the actor as a performer. The actor is supposed to be knowledgeable to engage with one or more pedagogical tools as her performance demands and what works best for her (Stern, 2017) as there is nothing sacrosanct about a pedagogy. Various studies (Kapsali, 2013; Evans, 2009; and Murray and Keefe 2007) have noted some traits about actor training methods to have been influenced by dominant ideologies as well as theatre making and performance.

These ideologies and social conditions are pointers and removing frontiers for upcoming pedagogues to invent indigenous pedagogies to meet the indigenous actor's demand rather than borrowing of existing pedagogies whose principles may have their shortcomings. In a similar vein, Joseph Roach describes the scenario that modern stage and actor training

employs “hermeneutics of suspicion (1989:156)”, this can only mean that the theatre practitioners of voice, speech and body training shift the blame or finger at culture and developed cultural organisations as agents of subjection. The method has been observed to have its pros and cons in the development of an embodied actor in performance. Other studies have reacted to accent interpretation (Blumenfeld, 2002), vowels realisation, oral posture and texts interpretation. Mainly, the glitch is the realisation of vowel for accent and character portrayal. For a while, the word ‘acoustically equidistant’ has been used to describe the position of the intermediate vowels [e, E, o, □]. Nicholson (2017:124) observes that Peter Ladefoged’s response to Daniel Jones description of vowel are not definite and the publishing of the cardinal vowels x-ray views leaves a gap as Jones only published four of the eight cardinal vowels which may create confusion in the minds of people.

As this confusion continues to hamper the training of pronunciation and accent realisation for character interpretation by actors, vocal performance in the Nigerian context continues to be a setback and a hindrance to intelligibility and diction. Mechanical diction, dialogue, coordinated breath support and tension continue to be the order of the day for the actor. Recent studies like those of Ladefoged and Disner (2012), have pointed out that the height of the tongue continues to change due to idiolects, culture and the ability to exercise the tongue muscles, mainly the genioglossus and mylohyoid muscles, while increasing and reducing the jaw other tongue positions are controlled more. The actor as a second language (L2) speaker has the ability to control and produce in various respects, the necessary tongue shapes in particular if he exercises the aforementioned muscles.

With the above observation, what may be interesting to actors as L2 speakers or users of a language may be to consider the study carried out by Havenhill, (2015) and Knight, (2012) about lip rounding and tongue position with awareness of each actor’s idiolect. Ashby and Maidment (2005) study again put emphasis on the configuration of the vocal tract. The summation of the importance of vowel teaching is that, vowels should be physically trained and should not be dispensed as an instrument for learning.

As observed by speech teachers and practitioners, actor/vocal training goes beyond intellectually understanding individual sounds from a phonetic perspective for articulation or pronunciation as some vocal instructors often find themselves to be blamed. Oftentimes, vocal teachers concentrate rigorously on the articulation (Shewell, 2009) of speech sounds without recognising that unclear vowels have a general propensity to maintain tension in the throat, diction which overall leads to tightness in the body and emotions. Vowels are also not necessarily the essence of vocal training as they may target accent realisation. Vowels vary from one speaker to another but they are usually a determining factor for a change in accent. Lessac (1997) supports the view that, in the creation of vowel sounds, there is space for mistake – mistake not errors but duration, lip shaping and tongue heights. Tightness in the body is as a result of tension whereby the actor finds difficultly in letting go in the muscles oral posture, psyche, emotions and habitual body posture. In their observation on speech training, Hurt (2014) and Bailey (2016) state that actors commonly hold their breath by pressing the tongue to the roof of the oral cavity, thereby; creating tension that deprives them from optimally vocalising. This statement is dependent on how the actor feels and experiences sounds and emotions resonating in her body generally before transmitting it to the audience.

Another factor for consideration is the first language (L1) of the actor. Hurt (2012) establishes that "speech happens when your voice hits the mouth and phonation or articulation", without the intercourse of the tongue and other organs of the oral cavity no one can understand a sound you produce." While this is true in the absence of the cultural context in which the speaker/actor is from, 'voice and speech are two main qualities than any other that the actor creates as the character's soul before an audience or listeners'. The voice and speech must be flexible within the actor. Skinner (1990) is of the opinion that the voice and speech are two main tools that are most effective and must be utilised in convincing ways possible to carry the nuances of the most hidden emotions communicable to an audience.

For the purpose of bringing these qualities to reality, through vocal training, the speech of a character being portrayed must be brought to life synergistically in utterance by the

voice, mood, emotions, physical behaviour in body gestures and other aspects. The process of vocal actor training is subject to what pedagogy focuses upon and the study's summation is for the actor to tap into her "body wisdom" (a term coined by Arthur Lessac) to find what is healthy and productive in performance space. However, it includes optimum exploration when genuinely incorporated and in realisation of the:

> human skills and talents, be they physical, emotional, artistic, intellectual, intuitive; and provides a creative problem-solving resource for such related area as...physical training, body-voice-speech therapy and research in identifying body synergies, among other areas (Lessac, 1997:3).

It is important to state here that Lessac's definition of the only art form which makes the best use of the total human tool is vocal actor training, which requires the skill in movement, sensitivity, vocal life, nonverbal communication, and the development of character. LKT when optimally utilised will enhance performance space and can be a carryover to "real life" situations and thereby elevating human behaviour for the actor/individual. It is a healthful approach to training and equipping actors as well as underpinning their earlier vocal training.

Vocal training for the speaking voice demands an engagement of more than the vocal apparatus to the whole body – mind, emotions and behaviour as they embrace performance. Another definition of vocal training is described by Morrison (2001:172) as:

> That form of verbal communication which may be anticipated in any given environment. It draws the least attention to the way in which a speaker communicates while expressing the message of the speaker with maximum control over his environment; and realisation of all his objectives in terms of response from his audience.

Morrison's definition focuses only on the diction of the actor but is not concerned about her feeling process and use of the whole body as an instrument to break away from habitual patterns that may hinder performance. The use of speech is however for an audience member in a theatre. It is to communicate the thought of the playwright in a convincing and persuasive manner that does not just sway the audience by the aesthetic rendition of the actor, but after rigorous rehearsals, is able to preserve every message in the vocal apparatus of the actor through an embodied actor training. Turner (1993:7) informs that:

> Speech in the theatre must be governed by the necessity of speaking to large numbers of listeners at one and the same time, so that every word carries convincingly; and yet it must be controlled that the illusion of reality is not destroyed.

The ability to convey message and communicate without destroying the illusion of reality may be rigorous, laborious, experiential and complex, yet it is the essence of the speaking voice in the theatre, but this definition does not relate to how the whole human instrument is retrained for vocal expression. It also demands creation of the vocal life of the character organically for it to be convincing. Park (1997:1518) stresses that for actor's characterisation, "it is essential to break out of one's own mindset in order to experience what the playwright has written". The speaking voice in the theatre through the use of the human tool, requires personality growth i.e. voice, body, mind, and emotions and how this can be dynamically achieved through the actor's artistry. It further demands the use of energy. Voice and speech work can be difficult. It is a topic characterised by attitudes, from fear to confusion in its mysticism. Morrison (2001:128) posits that:

> This bewilderment comes from the inability to understand the human anatomy or organs responsible for voice and speech production in the theatre.

There are various definitions to voice and speech and how they relate to acting for the stage. However, the purpose of speech in the theatre is to perform and communicate to an audience who may be able to decode, play out accent, create mood, and observe how breath plays on emotions and diction while delivering the language of the dialogue in a persuasive manner.

In the bid for the actor to control this illusion through his vocal apparatus, "his vocal and speech needs within performance are constantly changing and are never fixed..." (Knight, 2012: ix-x) he strives for intelligibility which is the agreed, desired, universal, and reputable manner for speech training. If intelligibility is what the actor has to focus on for effective communication in performance, how then does the undergraduate actor achieve this is a convincing manner? Is she aware of her needs? And will she go the extra mile in utilising the tools accessible to her? One of the common observations in undergraduate actors is poor voice and speech habits and habitual behaviours which lead to unintelligibility; thereby resulting in not giving speech sounds – different vowels – enough time (duration and shaping) in production (Crannell, 2012). Despite the definitions of voice, speech and body and mind training, one can see the shortcomings or pitfalls of these pedagogical tools and their proponent's view on what aspect to focus on.

Vocal training encourages and does not limit vowels and consonants. The aim is to be as clear as can be to the audience. To put in clear terms would mean to be as intelligible as possible. Lessac (1997:69) submits that consonant sounds create room for intelligibility as "consonants are the anatomical 'spine' to vocal life". A consonant sound can change its form at initial, medial and final positions of a word and only silent when in specific environments. Vowels can change form due to accents, idiolects, dialects and regions. Speech for the stage extends beyond line rendition. Fillebrown (2006) describes stage speech as an analogy of prose and poetry. It means that speech varies from song like walking from dancing. Speech can be likened to prose and song the vocalisation of poetry, but this is dependent on how elevated the pitch of a voice is.

This study investigated the nature of training undergraduate actors encounter in an educational theatre such as in the University of Ibadan. It further examined the effects of

Lessac Kinesensic on undergraduate actors post exposure to the training. One aspects of the treatment in training was the appreciable knowledge in speech sounds, their qualities, vocal energies, body energies, and how they related to emotions, breath and body postures to help situate character portrayal in performance Tocchetto de Oliveria, 2009). This kind of vocal training was unlikely to occur in classroom in the context of this research. Monod (1971:88), observes that:

> In the classroom, however, phonetic and phonemic problems are seldom dealt with in an economic and effective manner. By phonetic difference is meant here an absolute distinction between sounds such as the allophones of a sound in different linguistic contents or in different geographic regions, whereas the phonemic difference is understood as that which entails a difference in meaning...the important thing is to master the sound system at the phonemic level which is necessary in order for communication to take place.

Importantly, this research involves exposing undergraduate actors to speech sounds for different performance situations without the aid of the International Phonetics Association (IPA) sound chart for different texts but through a sensorial awareness. The sensorial awareness is what Lessac Kinesensic Training (LKT) is based on. It is a self-teaching approach. Lessac Kinesensic pedagogy was experimented on selected undergraduate actors, the study went on to determine its effectiveness in embodied actor training for different performance situations. It created a carryover to real life situations through series of explorations and applications.

Many undergraduate actors, student-speech coaches and directors, have failed to comprehend that the component of a good voice and speech comes with endless vocal training for the speaking voice in response to the body; to effectively communicate the depths and range of the human behaviours an actor must present for character portrayal, regardless of the attitudes toward training. An untrained voice, speech, body and mind is

most likely to result in the audience getting bored or distracted by the dialogue if the actors are not intelligible and expression.

Undergraduate actors in educational theatres perform or participate in production primarily to earn marks as their degree programme demands. They therefore do not take into cognisance the rudiments of acting as it affects vocal skills, demands of their profession or bear in mind the feelings of the audience, and especially the message being conveyed by the playwright. The most inexcusable of all the forms of poor performances in educational theatres is that which showcases itself in the undergraduate actors' nonchalant or lackadaisical attitude to the profession which is not equalled by craftsmanship.

Questions abound in this research toward assisting undergraduate actors in achieving a well- trained voice, speech, body and mind before, during and after a performance devoid of artificiality. Can mood, energy and character portrayal be achieved without vocal training, disciplined, yet full of nuances, rich in the music – harmonious or cacophonous – of human speech? Such creation calls for voices used theatrically, belonging not to undergraduate actors showing off but to artists performing. The loss of such craftsmanship in the theatre has meant, to a large extent, a failure in the communication of the wonder, the astonishment which is theatre.

Speech in acting is one of the actor's core tools for communication in all modes of communication from period to texts, to styles during dialogue or monologue – whether for radio, television or the stage which is the focus of this research. We can only try to imagine dumbness or silence as put by Guevara that 'silence is argument carried on by other means.' This means can only be appreciated and still convey the message through communication called mime. This is also an avenue to use the body and mind energies to convey a message. Speech is not only about talking to be heard, but importantly to be intelligible, expressive and specific to any user of a language—be it native speakers or second language speakers. Of course, it is often argued by undergraduate actors and speech trainers that the study of voice and speech is complex and there is the fear of achieving its aesthetics because of its sometimes mysterious nature first, on phonetics

teaching that seems mechanical and second, on accent training and realisation for performances.

A look at some views aided this research on how best actors can achieve aesthetics in voice, speech, body and mind. Morrison (2009) adds that tongue, lips and soft palate movements can define speech as the pattern of the sound which we generate. Crannell (2011:353), on his own part, agrees that the purpose of speech is to communicate verbally, effectively. If effectiveness is what we have to strive to achieve, to aid the actor in maximising her potentials with her vocal apparatus as it relates to voice and articulation which are essential for the whole process of communication, what sort of pedagogy or training(s) will aid these important roles and potentials? Clay (1968:238) informs that "stage speech as defined by Arthur Lessac, is not a self-conscious listening but a trinity of three separate but united actions" these are consonant, structural, and tonal actions. These actions are centring on Lessac's concepts, as he has devised an aesthetic of speech movement based on feeling, tasting and sensing as opposed to hearing.

This study was therefore, geared towards how the actor embodied Lessac Kinsesensic Training (LKT) in the voice, speech, body and mind. How actors engage with a new training experience, how her body works; the organs of speech; the posture of the body, how the body and mind works in performance space, feeling of resonance in cognisance with delivery for performance, having a sensory awareness rather than listening to what has been said. Resonance is always accompanied by breath and this breath constitutes a major part of the process of speech which will be discussed at length. For now, we have to understand that speech is acquired from all stages of life – babyhood to adulthood – and affects all modes of communication as human beings, and this demands specific organs (muscles, tissues, bones, tendons, cartilages etc.,) of the body for communication as informed by Morrison and Linklater. Clay (1968:240), in his review, states that according to Arthur Lessac, "voice begins where breath ends...voice controls breath and never vice versa". Voice for performance demands detailed and extensive training and familiarising or being aware of the articulators and the dynamics of vocal delivery – these articulators

Knight (2012:37) categorises into three (vowel, consonant and immovable); these categories involve the shaping of the speech organs for performances.

The training of speech in acting also termed as the speaking voice as the concern of this study will briefly give an overview of the evolution of vocal training and how it has addressed the current study. The study also proposed the various ways for measuring the effect(s) of any vocal pedagogy applied to undergraduate actor training. One of the principles of LKT is unlearning old habits and relearning new habits through a teacher-within approach i.e. removing the fact that you can talk and learn like a child but using the adult in you to guide your learning process and in so doing learn new habits for acting styles for character portrayal by both actors and directors. By employing a vocal pedagogy to the current study, it created an atmosphere for measuring the outcomes for applying other vocal pedagogy to undergraduate actor training for effective communication and entertainment.

Character portrayal is not only seen in the acting but also the diction i.e. vocal artistry that is always and readily at work. Crannell (2012: 7327) describes diction as a "choice of words". He furthers this by categorising them into two 'oral and written diction', oral diction being what we find the actor expressing in a play-text "composed of words that are somewhat easily understood because the audience members must get the message immediately." While the written diction is speech carefully selected with figurative and colour language to be later documented. It can be viewed as an extemporaneous speech for the audience. The use of diction by the undergraduate actors is being aware of the cogent lines and words of the character to the audience.

Diction can also be in terms of the particular sounds of the character being portrayed. Specific sounds may be inhibiting an actor's performance yet for communication, and in order to draw the audience to her line renditions, there needs to be an element of conspicuous diction. Berry (2001), on her part, relates diction with resonance. What this implies is that when an actor is using lesser notes, s/he must be more aware of the diction and deliberately maintain the chest resonance when using the higher notes for resonance. Furthermore, she attests to it that "when diction is not clear, only exercises can put it

right". The study of spoken speech for acting especially may be separated into distinct areas which will be the major part of this research. It is important at this juncture to define some of these areas which readily affect actors and people in fields of communication.

According to a study carried out by Benson (2005:56), "undergraduate actors' effort to use their vocal instrument –voice, speech and body – indicate that there is a missing link in the aesthetics of acting alongside her delivery". This informs that little or no preference is neither given by undergraduate actors nor do their directors endeavour to make such criterion for effective verbal communication. However, the burden is on the undergraduate actors, dialect instructors/speech instructors/ speech coaches or speech director as the case may be - if there is any.

1.2 Statement of the Problem

Research focusing on undergraduate actors' vocal training in Nigeria are relatively few. This stands in contradistinction to the large number of almost limitless scholarly works on the subject matter carried out in Europe, North America, South America, Asia, Oceania and parts of South Africa, (Munro and Lemmer, 2018; White, 2017; Lemmer, 2014; Searle and Bailey, 2014; Stoller *et al*., 2014; Saklad, 2011; Seton, 2010; Varosanec-Skaric, 2008; and Verdolini and Ramig, 2001). As a result, these studies are based on western pedagogies with the intention of training the western actor. African teachers of vocal training have almost always supported their training with these western pedagogies (Stephen-Adesina, 2019). There was therefore a need to design and or modify existing pedagogies in order to develop a Nigerian/indigenous pedagogy for undergraduate actor training in Nigerian universities especially where acting performances abound on theatrical stages, site specific, TV drama, film and cinema.

One of the problems which this study addressed is the dearth of studies focusing on African vocal pedagogies to improve undergraduate actors' training/performance in terms of voice, body, mind, and diction for character development, improved resonance – often called 'projection' – voice imitation or manipulations and accents development. McGuire (2016:3) gives some insight to the essence of effective accent realisation that actors commonly shy away from. In her words: "remember that you are an actor, not a linguist.

Your purpose is to *illuminate character and text and to tell a story*, not to fool the indigenous speakers of the accent". Oftentimes, undergraduate actors have neglected accent as a vital tool to making their character believable to the audience. There is also the neglect of the nitty-gritty in improving vocal artistry.

Other studies have shown how phonetic application (vowels and consonants sounds) as a cognitive learning (Collins and Mees 2013) approach has improved on the pronunciation in vocal training. Most of the time the phonetic technique create artificiality in vocal delivery (Nicholson 2017), as well as character portrayal as it departs from the rate, rhythm, accent and pitch of the character. As observed by Stolzenbach (1964:231), speech teachers "scorned vocal training as a promoter of unnatural and affected speech, read with dull, flat, uninteresting, and untrained natural voices; and, disdaining standard diction, spoke with informal and sometimes provincial pronunciations".

This study, like the experiential approach carried out by Lewis and Lemmer (2018) in a search for Africanising embodied actor-training, was used to deduce that adopting a measurable vocal pedagogy to training Nigerian undergraduate actors in an appealing and pleasurable manner that is not artificial proved effective and essential for undergraduate actor training. Pedagogical tools are designed to help improve actors artistry, embrace their identities regardless of geographical location; honour voice; develop diction in dialogue or monologue rendition regardless of the language(s) spoken; improve posture and breath support for different situations; and understanding how all of the aforementioned affect performance through the body and mind. In other words, the study examined how a pedagogy applied to a target group was significant. Further, there was desire to investigate how one or more vocal pedagogies could be employed to create an embodied actor without conflicts of principles for educational theatre benefits.

Although studies carried out in South Africa – Bantu languages – employing Lessac Kinesensic as a vocal training have endeavoured to meet the growing needs of the South African undergraduate actor (Lemmer, 2018), they are not generally applicable to the African undergraduate actor. To this, there is still a need for more research or studies on undergraduate actors in African countries as it obtains in Nigeria where a variety of

languages: from three language families – Afro-Asiatic, Niger-Congo, and Nilo-Saharan – (worldatlas.com; Campbell, 1999; and Katzner, 1998). This study is essentially based on this premise and even more (i.e. to procure possible variables for measuring vocal skills). In the absence of a home-grown pedagogy, the study consciously apply Lessac Kinesensic pedagogy as a standard for improving speech intelligibility and character portrayal among undergraduate actors. It will consider the major inhibiting factors that affect the Nigerian undergraduate actors' performances. Berry (1992:15) expounds upon five of these factors as follows: (a) The reliance we put on our own sound (b) How the actor works (c) Attitude to words (d) How we present language and (e) An over-educated response. Knight, (2012: ix) adds that, there is also the genuine needs of the actor in relation to speech and "since these needs are constantly changing and never fixed, there is also the aesthetics of individual speech sounds which are inevitable." A research carried out in 2005 at the University of Ibadan (Benson, 2005: 68) revealed that effective speech delivery was feasible if there was the availability of the:

> Voice and speech pedagogues, pedagogies, ample rehearsal durations, well-equipped laboratory to assess and analyse vocal qualities of undergraduate actors at pre and post phase of carrying out a research, but the clause is in their commitment to various vocal pedagogies.

The present study focused on the effectiveness of a vocal pedagogy applied to specific performance situations while considering the challenges the target group encountered. The thrust of the research was to observe how these undergraduate actors receive and apply the new pedagogy, their perception about their performances, documenting an acoustic findings of their vocal performance and what listeners perceived of their performance. To achieve competence in the training of voice, speech, body, mind and emotion to character portrayal in the new millennium, undergraduate actors in Nigeria need to understand the essence of training as vocal athletes (Berry, 1991; Jones, 1996; Umukoro, 2002; LaBouff, 2008; Gaskill and Hetzel, 2017; Agnew and Moor, 2017).

1.3 Research Questions

1. What are the pre and posttest scores of vocal pedagogy used in actor training across the two experimental and control groups?
2. What does the vocal pedagogy focus on at pre and posttest of actor training before and after the treatment?
3. To what degree do undergraduate actors memorise the principles of a vocal pedagogy for performance?
4. What are the pre and posttest knowledge score of Lessac Kinesensic across the two experimental and control groups?
5. Will there be significant main effect of years of actor training, first language and treatment on vocal expression among undergraduate actors?
6. Will there be significant main effect of years of actor training, first language and treatment on intelligibility among undergraduate actors?

1.4 Objectives of the Study

However, the research proposed to investigate the depth of understanding undergraduate actors have in respect of their tools, how knowledgeable they were about the demands of their voice, speech, body and mind, how they perceived their improved performance over a period of training and how they effectively used accent with or without the interference of their L1 in training for performance. Finally, it investigated how their years of experience in their training programme, knowledgeability of existing vocal pedagogy inhibited or improved their performances continued to be addressed by them effortlessly.

The main objective of this study was to examine the effects of Lessac Kinesensic Training on vocal expression and intelligibility among undergraduate actors in University of Ibadan (Experimental Group) and Obafemi Awolowo University (Control Group)

1.4.1 Specific Objectives of the Study

The specific objectives of this study are:

1. To compare the pre and posttest scores of vocal pedagogy used in actor training between the experimental and control groups.
2. To highlight the focus of the vocal pedagogy used in actor training before and after the treatment.

3. To examine the degree to which undergraduate actors memorise the principles of a vocal pedagogy for performance.
4. To compare the pre and posttest knowledge score of Lessac Kinesensic between the experimental and control groups.
5. To investigate the main effect of years of actor training, first language and treatment on vocal expression among undergraduate actors.
6. To investigate main effect of years of actor training, first language and treatment on intelligibility among undergraduate actors.

1.5 Justification of the Study

During the course of this study, undergraduate actors in University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, Nigeria Ile-Ife were equipped with training in Lessac Kinesensic Training (LKT) as it applied to vocal expression and intelligibility. It was expected that this study would improve their earlier acquired skills in vocal expression and intelligibility situations in the theatre. The findings of this study brought to light the effectiveness of LKT in improving vocal expression and intelligibility on years of actor training experience and first language among undergraduate actors. This changed the perception of the participants as there were directing students amongst them. It also changed the orientation of the participants to accent/dialogue/vocal/speech coaches as undergraduate actors in the educational theatre.

The study also investigated the effectiveness of the adopted principles of LKT in improving vocal expression and intelligibility. It will further contributed to the existing scholarship on how effective LKT has been and will continue to be on years of experience, first language on vocal expression and intelligibility among undergraduate actors.

1.6 Operational Definition of Terms

Undergraduate actor: University students studying to earn B. A. degree in Theatre Arts, Dramatic Arts, Creative Arts and Performing Arts.

Vocal Pedagogy: Thisentails voice, speech and body instruction used in teaching participants on how proper speaking techniques are achieved.

Years of Actor Training Experience: This means the period in which the participants as undergraduate actors have been exposed to acting and voice and speech training.

First language: It implies the first language spoken by the participants before any other language(s), usually, the mother tongue.

Lessac Kinesensic Training: This training is a vocal instruction involving the voice, speech, body and mind. It is constantly in a process of organic growth.

Vocal Expression: This means the outcome of vocal apparatus, i.e. organs responsible for speech sounds production and how the undergraduate actor applies it. It may be a learning or imitation process.

Vocal Skills: In this study, it is the quality and ability to effectively use the voice and speech in alignment with the body, phonation, articulation, loudness, breath, resonance, pitch, and emotions for any given communication.

Vocal Learning: This is the modification of vocal output on phonation and auditory explorations, which can have an impact on any specific duration of training. It will be used to detail how familiar actions of the body, emotions, energy development and new sounds are formed and stored in the undergraduate actor's mind. This may start as a cognitive and conscious process to an organic realisation.

Sustention of End Consonants in Syllables: In this study, it is the ability of the participants/undergraduate actors to sound the consonants at the end of each syllable which is awareness and sensing process.

Intelligibility: In the study, it is how articulate the participants can be in terms of individual sounds, words, linking the words to sentences in a contiguous manner. It also means putting their body, mind and accent to effective use in a convincing and comprehensible manner to an audience.

1.7 Significance of the Study

Specifically, the significance of this research was to understand and design a qualitative and quantitative measures on how years of actor training experience, first language and knowledgeability of existing vocal pedagogies continue to improving undergraduate actors voice, speech, body and mind using a vocal pedagogy that may be applicable to different categories of undergraduate actor, as well as debunk the common statements by

undergraduate actors that there is no need for training the voice, speech, body and mind for effective vocal and body expression and intelligibility.

This study brought about important factors to consider when preparing for theatrical performance for any class of audience, since the goal of a performance is not just to entertain but for the actors to make their performance believable and not deceptive while informing and educating. It is believed that theatre is a mirror of the society, a tool for provoking emotions, empowering and correction; the dialogue then should be well packaged for any audience regardless of culture, age, or paradigm shift most especially in voice and speech. The main goal of any performance is 'intelligibility'.

Furthermore, the study encourages teachers/trainers of voice and speech to adopt LKT as a suitable and feasible pedagogy for any given actor. For this to be effective, the results of the study are being published in order to serve as a benchmark for future studies.

1.8 Delimitation of the Study

This study will be delimited to:

1. Pretest posttest non-equivalent groups using quasi experimental 2x2x2 factorial matrix.

2. Undergraduate actors in selected universities in South-Western Nigeria (University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, Nigeria).

3. Acting and Speech and Rhetorical Arts undergraduate actors in 300 and 400 Levels.
4. An experimental and one control group.
5. Multi-stage sampling technique.
6. Self-developed questionnaire as instrument for data collection.
7. Pre-recording and post-recording audio samples.
8. Descriptive statistics of frequency counts and percentage to analyse demographic profiling of the participants while ANCOVA will be used to test the hypotheses set at 0.05 level of significance.

9. Independent variable of: Lessac Kinesensic Training (voice, speech, body and mind).
10. Dependent variable of: vocal skills.
11. Moderating variable of: years of actor training experience and first language.
12. Two trained research assistants.

1.8.1 Limitation of the Study

There is a general perception about participants' reluctance to divulge concrete information while filling questionnaire, the researcher assured them of confidentiality. During the course of the training, some of the participants mainly males dropped out resulting in subject mortality. The researcher gave incentive to enable them stay through the training. Three major limitations were encountered during the course of the study; first, was finding a certified Lessac Practitioner/Trainer to co-host the workshop/training session with the participants. The second was delay in the researcher getting certified as a Lessac Practitioner – as a result of funding for traveling to attend yearly and regular training by Lessac Trainers. The last was inability to find an adequate speech laboratory with well-equipped acoustic tools and applications to carry out a bench work for substantial detailed acoustic analyses and discoveries.

1.9 Methodology

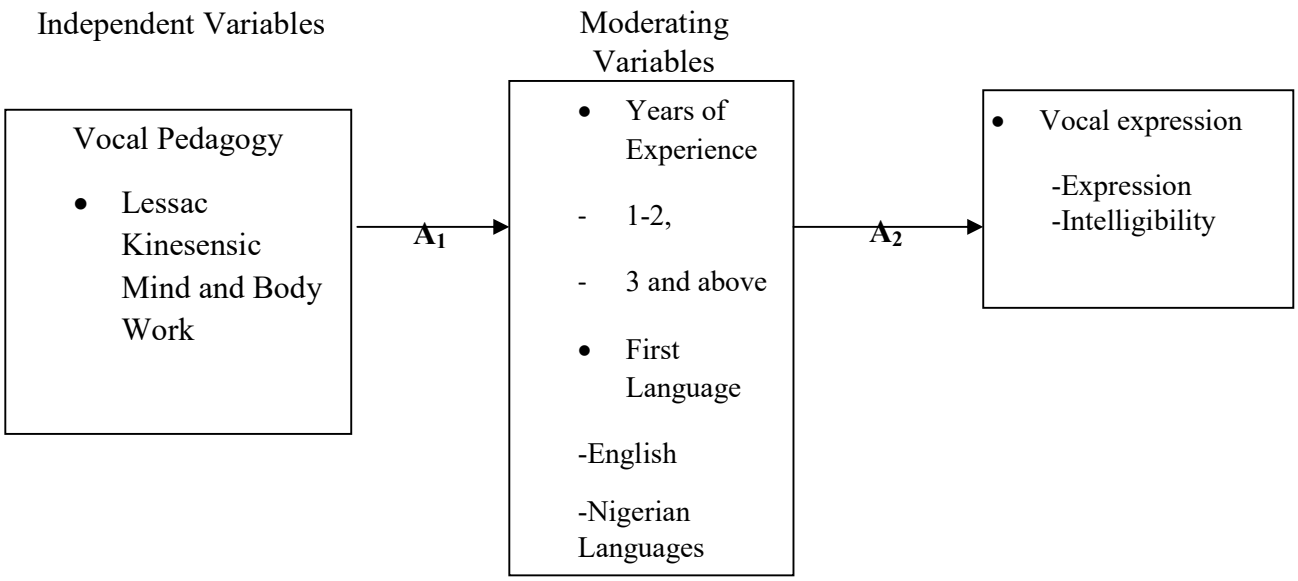
For thorough research in order to contribute to knowledge and understand the essence of vocal training in the educational theatre among undergraduate actors. The research was an experimentation of selected principles of Lessac Kinesensic Training using dialogues from Ola Rotimi's *Hopes of the Living Dead*, participants' first language in conversation, selected phrases and sentences from Lessac's "*The Old Resident*" a consonant selection piece designed for training actors through exploration in order to improve vocal expression and intelligibility as well as measuring outcomes at pre-recording and post-recording sessions. Administration of questionnaire that formed a pretest for the instrument after an eight-week training and testing of the treatment, questionnaire was administered as posttest which was then followed up with a post recording for acoustic and perceptual analysis.

CHAPTER TWO

LITERATURE REVIEW

2.1 CONCEPTUAL FRAMEWORK FOR THE STUDY

Figure 2.1 represents the conceptual framework for the study. This is carried out based on the assumption that undergraduate actors need help to focus on vocal communication and intelligibility in performance situations through measurable outcomes. It is conceptualised, however, that vocal training demands a duration of short or long term intervention to become aware of their voice, speech, mind, body and emotions during character development.



INDEPENDENT VARIABLE **MODERATING VARIABLES**

Treatment (2 levels) Years of Experience (2 levels) First Language (2 levels)

DEPENDENT VARIABLES

Vocal Expression

Intelligibility

Figure 2.1: Conceptual Framework

Source: Self developed for the study

2.1.1 Conceptual Framework

The study therefore adopts basic Principles in Lessac Kinesensic Training (LKT) as a psychophysical training to bring about effectiveness in skills for vocal expression among undergraduate actors. It is also conceptualised that years of actor training experience in vocal expression as well as first language and background of low socioeconomic status are factors that may act to moderate the effect of vocal training on vocal expression among undergraduate actors.

The essence of not combining basic principles of various approaches is not to confuse undergraduate actors while training them. The argument is that they exhibit, to a great degree, patience, commitment like an athlete, and exploration exercises through rigorous training without targeting at a goal when exposed to a new vocal pedagogy, without the interference of existing approaches. Acting considers three basic things –how an actor feels, thinks and acts – for character development in performance. These three can only be achieved through awareness. Weiss (1992:101), agrees that "it is true that many voice training methods contain some awareness exercises in the sense that they bring to consciousness hitherto unknown or unexplored sensations and movement possibilities". It further means that it requires deeper vocal training for a well-organised optimal performance and the ability to make their performance believable/realistic.

The components of vocal training that will be emphasised in this study will include: body, mind, voice, speech and emotions as regards how they complement one another, and bring about effective character portrayal application by undergraduate actors from contextual to textual through vocal expression. It is assumed that having an appropriate knowledge of specific vocal habits common to undergraduate actors, especially dyslexia (a problem with learning to read or interpret words and words and symbols but this does not affect the overall intellectual performance of an individual) which (Berry, 2001; and Oram, 2018) describe as a major problem common with actors. For Berry (2001:20), it may also be a gift in itself and that:

> When we read words they take us into a different area of awareness than when we speak them, for when we read, our brains are being used to interpret what we read so that our imagination is not as free as when we are speaking them aloud.

The concept of the study is to consider vocal training as an effective medium for intelligibility, specificity and expressibility resulting in a positive attitude toward vocal artistry with and without the transference or interference of mother tongue. Weiss (1992:101) further adds that:

> Voice and speech develop in infancy as a child acquires language. This development ceases when the child becomes proficient in the mother tongue. Obviously, voice and speech characteristics are determined by language, the milieu, the anatomy, and the temperament of the speaker. Learning a second language or singing or acting can further increase voice and speech potentials.

Thus, learning an accent through phonation, articulation and respiratory sounds without imitation but discovery will give the undergraduate actor wealth of voice and speech dynamics to pick from at any given instance; for they relate to character portrayal, emotions and behaviours.

2.1.2 The Concept of Speech

The term speech can be defined simply as speaking, diction, encoded for communication. It can also be defined from a scientific or artistic point of view – the processes and aesthetics are what redefine them from their field of endeavour. Speech can be related to language with a desire to be learnt. Yet, we can use language without speech but one cannot use speech without language. Language (Lyons, 2009), is logical, independent of speech, and it is well justified to say that speech is historically and perhaps biologically before writing in every natural language as we understand it. Speech, however, cannot be

synonymous with language. Often making a speech can be cumbersome if the sounds do not align with the listener. “Speech communication begins with a speaker” (Lucas, 2008:17). For Bryson (2001:22), speech also can have its positive and negative impact from different age group to peoples.

> The Cro-Magnon people were identical to us: They had same physique, the same brain, and the same looks. And unlike all previous hominids who roamed the earth, they could choke on food. That may seem a trifling point, but the slight evolutionary change that pushed man’s larynx deeper into the throat, and thus made choking a possibility, also brought with it the possibility of sophisticated, well-articulated speech.

What can be deduced by the above is that speech is mainly conceived in mammal; at almost the same moment, they can breathe and stop. Any attempt to communicate speech while eating will result in an obstruction in the larynx. The larynx, which is lowered and responsible for speech, generally is not from birth in place. It sometimes decreases before six months – curiously, the exact time when infants commonly suffer from Sudden Infant Death Syndrome (SIDS). The position of the human larynx explains why we can speak and animals cannot. Regardless of the human physiognomy and physiology, phonemes reflect instruction sets for motor cortex instructions which regulate the muscles that move the tongue, lips, jaws and larynx as we speak.

For Catford (2001:163), speech is a continuum; a continuum flux of initiatory, phonatory, and articulatory states and movements, constantly changing often overlapping and interpenetrating and influencing each other. The aim of speech is not to say it in isolation as sounds except there is a need to understudy specific sounds in a situation. Morrison (2001) how many people throughout or in their careers and lives have been marred by a small amount of voice and speech deficiencies even in their personal relations, thereby reducing their ability to communicate fully what they want to express?

For certain individuals the mother tongue has impeded their effective communication in private and public spheres that are distinct and can tickle others' ears rather than for them to listen to the content of the message. The essence of speech and its training is to help the individual or actor to communicate in a distinct manner and to hold attention. Regardless of the culture of the actor, the intention of speech training must be to accommodate intercultural actors for a globalised audience. McAllister informs in her article on the role of presence and questions what is to be, should there be multiple of trainings? Does the continuum of ways of developing stage presence affect the range of listening? The ranges, styles, and ways of developing stage presence can be deduced to work sometimes inadvertently to a good success in dialogue other times they are observed to be purposively carried out and overall yield a well formed dialogue in performance.

Speech has been defined, argued and investigated from scientific, artistic, and ideological points of view in accordance with actor training for identity and development. Scholars like Myers (2013), observe that clear speech is an efficient way of enhancing a performer or individual's intelligibility and loudness, it may not all together be concluded that loudness results in crispiness or distinction in speech. The application of speech and voice training to the undergraduate actor in the twenty-first century has caused a paradigm shift and the introduction of new pedagogical tools to inform a continuous training style. Lessac Kinesensic Training in terms of three vocal energy actions requires the actor to organically through awareness, experience what is going on in her vocal tract, the vocal vibration s, and invest in a creative manner a structure for speech intelligibility and awareness. In this manner, a resonant voice is produced that so easily and effortlessly projects to any given audience regardless of paradigm shifts. What this implies is that, LKT with an organic and playful purpose underlines the need to combine these three vocal energy actions.

Vocal training by pedagogues often involves the voice and speech for effective communication, and the field of voice and speech education continues to expand and be dynamic for the actor as well as the trainers. Munro et al. (2009:328) inform that, as convincingly argued by Martin (1991) and VASTA Newsletters (1987-1996), the three

voice/vocal development systems for actors which are currently dominating the field are the works of Arthur Lessac (1967), Cicely Berry (1973), and Kristin Linklater (2016).

Many scholars from linguistics to theatre and communication have attempted to define the nature of speech as it appeals to their field of endeavour. Whilst this may prove effective, the conclusion is still that it takes duration to see its manifestations. Crannell's (2012:278) observation is that speech training is a continuous process that yields a long-term effect on the individual. It further requires dual effort of the actor and trainer.

> Most voice and speech teachers acknowledge that changes take place very slowly. A teacher is successful if he or she is able to motivate students to the point where, with concerted effort, they are able to control their speech/voice during specific drills or exercises. However, it will take many months (and perhaps even years!) before positive changes have become a permanent part of a speaker's verbal patterns.

2.1.3 The Concept of Voice

The actor as the subject for this study craves for optimal vocal performance either for her speaking or singing voice. The voice which is built as "two small folds of flexible tissue run from front to back inside the larynx" (Cazden, 2012:10) and common among non-professionals as 'cords' and among professionals as 'folds'. The voice exists in the larynx up to the mouth cavity where there are constant actionslike chewing, swallowing, breathing, and coughing to expel foreign bodies or phlegm as well as the intake of smoke by smokers. Voice trainers carefully train actors and singers the use and misuse of the voice to produce good breath and realise intelligible sounds called phonation. The phonation types are named differently depending on how the blockage of the airways, how a specialised set of muscles around the larynx stretches for pitch ranges, and how it affects the loudness and emotions of an individual. According to Esling, Moisk, and Coey app that is a resource tool for linguists, students of learning the perception towards the use of IPA symbols, and its benefit is to understand the tongue position, jaw height, larynx

height, glottal and pitch ranges and regions. The categorised phonation types are as follows:

> Breath, modal voice, whisper, creak, whispery creak, whispery creak vice, harsh whispery voice, whispery falsetto, whispery creaky falsetto, harsh whispery falsetto, breathy voice, falsetto, whispery voice, creaky voice, harsh creak, harsh whispery creak voice, creaky falsetto, harsh falsetto, harsh whispery creaky falsetto, harsh voice, high pitch, harsh voice, mid pitch, harsh voice, low pitch. The auditory/acoustic cues that can be heard in the app for consonants, vowels, or voice quality can be associated by the listener with particular sounds occurring in the wide range of languages they may be familiar with 2and4.

These many changes according to voice and speech practitioners help actors to creatively produce definite character voices which have been described to portray societal influence that is a factor for consideration.

Pedagogues and pedagogical tools often place more emphasis on the voice as many are concerned with the voice and body. In her article, McAllister begs for responses that are likely to give trainers of voice a rethink for any group of actor training approaches. These models, pedagogies and teachings as they may be called should embrace intercultural acting classes and actors for a globalised world. Another is how this iconic mainstream voice and speech methods and schools conceptualise the training of not just the voice, but speech, body, mind and the energy exerted to emphasising accent as it continues to be a global demand of the voice in performance and stage presence.

Voice training continues to be dynamic as a result of the heavy use of the voice, lifestyle, and habits inculcated by undergraduate actors. Institutions are discovering principles to meet the demand of the actors who are usually from different cultures, geographical locations for individuals in Diaspora (Bhatia, 2002) and more so that the existing

pedagogical tools adopted in the institutions may be foreign to some actors. Steen and Deans (2009) discuss the introduction and effectiveness of Lecoq Movement and George Voice work to their training at their institution. The above view therefore gives room for the study to consider what voice and speech approach will meet the demand of the Nigerian undergraduate actor that can be investigated, designed and with the aim of being acceptable by institutions across the country. It may further be introduced through indigenous languages and practices that can then be globally acceptable.

Studies over the years continue to investigate the conceptualisation of the voice and how it continues to relate to the speakers and the listeners. It is sometimes from the perceptual, acoustic and psychological inquiry and all in an attempt to access how to inform diverse communities from public speaking, traumatic experiences, emotional situations, body changes like accidents, pregnancies to victims of abuses to performance spaces by actors and general conversations in everyday situations. Chin, Hayward and Drinan (2009) carried out a study on the voice and their summation is that, povertyof social relations, rejection in terms of preservation of selfhood, conflict was factors for consideration.

Behaviour and lifestyle habits are factors that have great impacts on the voice and how it continues to be perceived by individuals and trainers in improving how it is used as observed by Batchelor (2006:788) about the concept of the student voice. She writes that the concept of student voice "may be anatomised into three constituent elements: an epistemological voice, or a voice for knowing, a practical voice, or a voice for doing, and an ontological voice, or a voice for being and becoming". Habit has persistently become a lens at which the voice is viewed. Umukoro's (2002:92) observation on voice and speech teaching/training adds that, "the need for speech training in early life is underscored by the fact that a person's way of speaking is consequence of a vocal habit carried on over a period of time". The voice is flexible as it continues to strive to meet the different demands of the individual, situation, performance and community it finds itself.

2.1.4 Concept of Perception

Perception and sound as a form of sensation may be relative as to how knowledgeable an individual is in relation to many sounds, the pattern in which the hearer speaks and

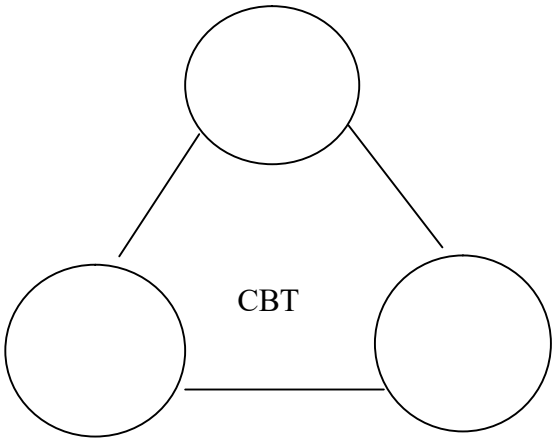
perceives sounds can be factors to consider in the deduction of assessment. The study of sound was ineptly considered in this study. The nature of the perceptual analysis is to form a basis for deeper research on how vast, experienced listeners may be in their conclusion of what can be attributed as better intelligibility.

> The modern study of sensory systems has its roots in the middle of the nineteenth century when philosophers and scientists wrestled with dualism. A topic of debate was sensation versus perception, with perception tied to the objects of the world and sensation to the attributes of the environmental stimulus. Sound, as the stimulus for hearing, was not considered an object. The fact that sound sources could be localized was explained by arguing that the perception of auditory space was derived through its association with the other senses (vision and touch) and with consciousness (Yost andSheft, 1993:195).

What can be deduced from the above finding is that, firstly, an assessment of mere or thorough stimuli cannot be the basis for the assumption by the listeners and secondly, through the recordings, the listeners perceive with consciousness and carefulness in the rendition of all articulation conditions of the speakers. In future studies, the research may want to consider the judges physically seeing the undergraduate actors as a form of visual assessment. On the other hand, “the actor dare not sacrifice the intonation range needed for emotional expressiveness for this projection” (Acker, 1987:77; Linklater, 1976:2-3)

2.2 Theoretical Framework Adopted in the Study

What we think affects how we act and feel.



What we feel affects what we think and do. What we do affects how we think and feel.

Source: Aaron T. Beck 1960

Figure 2.2 Cognitive Behavioural Therapy (CBT) Model

2.2.1 Cognitive Behavioural Therapy

Cognitive Behavioural Therapy (CBT) was adopted to guide the design of the study. CBT is a psychological model that attempts to explain behavioural patterns of specific participants to a treatment or adjust to something new and beneficial to their everyday application. CBT methods are rooted in the basic concept of the importance and main role of individual in developing and maintaining emotional and behavioural reactions to life circumstances (Gonza⇔lez-Prendes andResko, 2012:1). The role of cognition in this context is from a perception and awareness point of view with less of a memorised goal. CBT is a psychological model of behaviour, pioneered by Aaron Temkin Beck, in the 1960s. It is based on the concept that we all share our thinking (cognition), feelings (emotion) and behaviour. Our ideas, in particular, determine our emotions and conduct. The three keys – cognition, emotion, and behaviour – are embodied in how she (the undergraduate actor) laboriously achieves character portrayal in body, mind and voice.

There are three fundamental assumptions that underscore CBT model. The first assumption is that cognitive processes and content are accessible and can be known (Dobson and Dobson, 2009;and Dobson andDozois, 2001:3). This communicates that her specific thoughts, idea or confidence about breaking away from old habitual patterns or destruct patterns and when given proper training will make her create an awareness of inhibiting factors that had deprived her from achieving optimal vocal skills in performance situations.

The second assumption, according to Gonza⇔lez-Prendes and Resko (2012:1), is that 'our thinking mediates the way that we respond to environmental cues.' From this she does not just react emotionally or behaviourally to performance situations. Instead, the way she thinks about the character development from rehearsal to performance through the use of vocal and body energies (Tocchette de Oliveria, 2013), breath and posture, and finally dynamics in phonation for performance situations result from a sensorial approach.

The third assumption of CBT is that such cognitions can be intentionally targeted, modified, and changed. By way of understanding this last assumption, when such cognitions are changed through training, the actor begins to connect the contextual and

production learning to the mind of the character portrayed through usage and comprehension learning (as she has to understand the language and dialogue with other actors through the incorporation of articulatory, respiratory and sounds of the accent in question). The change can only occur as a result of training the voice, speech, body and mind to which is exposed by a vocal coach instructor while undergraduate actor learns to incorporate the trainings to performance situations from 'self to self' and self to others.

2.2.2 Application of Cognitive Behavioural Therapy to the Study

This study investigated the efficacy of Lessac Kinesensic as a psychophysical training to enhance and create an embodied training among undergraduate actors in Nigeria with major focus on intelligibility and specificity in the optimal use of voice, speech, mind and body. Based on the concept of CBT and psychophysical training that an actor organically grows from (Punpeng, 2012), the researcher trained the participants the ways of applying Lessac Kinesensic principles to performance and everyday use. In the course of the intervention, the vocal model emphasised both the importance of voice, speech, body and mind training from self to self and move from self to others i.e. the audience. It will document the reactions from past to future use of the model.

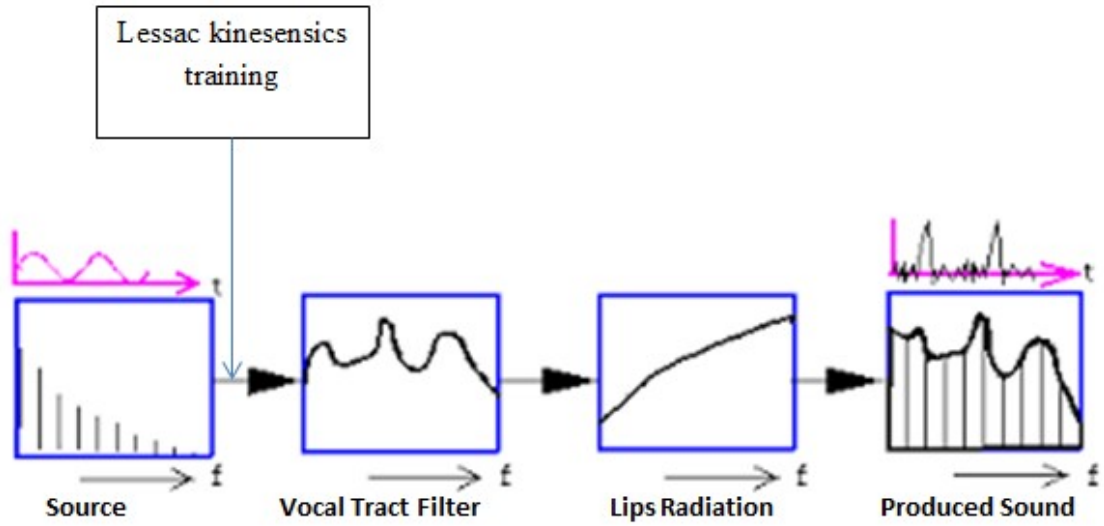
2.3 Source Filter Theory

The source-filter theory (SFT) applies to speech output as a two-step procedurethat involves sound source (two acoustic sources which correspond to voiced and unvoiced speech)generation, having a spectral shape and spectral fine structure that is formed or filtered by the vocal tract resonant characteristics. This aspect of the vocal tract anterior to the sound source filters mostly a source range. The filter is the entire supra-glottal vocal tract in the event of a glottal source.The vocal tract filter is always made up of certain parts of the oral cavity and the nasal cavity can also be included (whether the velum is open or closed) as an option. Sound sources may be either regular or aperiodic. Either periodic or aperiodium the sound sources can be, the sound sources may also be regular (voiced), aperiodic (whisper and/or/h/) or mixed (e.g. a breathable voice) (Story, Titze and Hoffman, 2001; Singh and Murry, 1978). Supra-glottal sound sources used in contrast to language, are aperiodic (i.e. random noise), but some trill sounds may sometimes resemble regular sources.

A voiced glottal source has its own range that involves a good spectral structure (harmonic and certain noise) and a typical spectral slope.An aperiodic (glottal or supra-glottal) source has its own spectrum which often contains a precise spectral slope and its fine spectral components (random spectral elements). Periodic and aperiodic sources can be simultaneously produced to create a blended and aperiodic speech typical of sounds like voiced fricatives. In voiced and speech analysis, the basic feature is the frequency it produces as a glottal source through acoustics but not how the vocal pitch is perceived; while characteristics, like vowel formants, are characteristic of vocal filter (resonances).

In both speech synthesis and speech analysis, the source-filter model is used and linked to linear development or production. The development of the model is due, in large part, to the early work of Gunnar Fant (1960), although others, in the models underlying acoustic assessment for speech(Johnson, 2004; Frisch and Wright, 2002; Ken Stevens, 2000; and Lamel, Kassel and Seneff, 1989)and speech synthesis, have in particular also played a significant role. The source-filter model is sometimes described as excitation signal for understanding voice and speech as well as its application for speech production and application either as white noise or unvoiced speech. In the simplest case, the vocal tract filter is approached by an all-pole filter, with linear prediction obtained to reducethe mean-squared error in the reproduced speech signal. The interference signal is then converted into the filter reaction and then a synthesised speech isproduced.

In relation to this study, it was hypothesised that outcomes of speech production, as described by the SFT, can be modified via the introduction of specific speech-based intervention. In this regard, this study employed selected principles of LKT on the voice, speech and mind as a psychophysical intervention for improving the quality of produced sound (see fig 2.2c).



Modified and adopted for the study

Figure 2.3: Linkage between Source Filter Theory and Lessac Kinesensic Training

2.3.1 The Source

In speech production there are two acoustic sources which correspond to voiced and unvoiced speech. The vibration of vocal folds as a response to airflow from the lungs is the source of spoken speech. This vibration is periodic and is independent ofthe qualities of the vocal tract (which change its spectral shape) it would be seen to consist of a series of broad spikes. Unvoiced speech is not a normal vibration but instead vibrations due to the strictures of vocals are caused by turbulent airflow. The sound created by constriction is described as source of noise. Thisthus concludes that it does notcontain a dominating regular element and a comparatively flat spectrum meaning that all frequency components are equally represented.

2.3.2 Vocal Tract Filter

Thefilter is a voice output system that alters but sometimes with precision the frequency of the vocal tract. The filtered speech is aided by a mechanism like a video and a tube of uneven cross section which is closed at one end (by the glottis). The tube has a typical spectrum like any other filter. This range changes significantly as the form of the vocal tract changes during the speech development/production. Various speech sound qualities are generated by a specific set of filter features for distinct voice sounds to calculate the speech ranges. It can be designed as a cylindrical tube at an end to understand the effects of the vocal tract, making assessing the filter spectrum much easier. The spectrum of the tube has a set of peaks that match resonant frequencies– essentially, vibration frequencies best fit into the tube.

2.3.3 Lip Radiation

Radiation is what happens at the lips as sound waves within the vocal tract are propagated out into the free air. The sound pressure variations inside the vocal tract are due to waves propagating up and down the tube and being reflected back at both ends. The air within the vocal tract is approximately, on average, stationary (forget about the flow caused by breathing – it's very slow compared to the speed of sound). The radiation effect is what happens when this trapped "piston" of air in the vocal tract causes the air in the free field outside the lips to move, creating sound waves that propagate out from the lips. The effect

is to differentiate the signal, which has the same effect as imposing a filter that boosts higher frequencies.

2.3.4 Produced Sound

The quality of sound produced usually involves an accuracy assessment, which is enjoyable and or intelligible to auditory output from a source. Sound quality, like when using instruments to measure to measure the precision by which source represents as initial sound;or when human react to the noise or measure its perceived resemblance to another sound,can be evaluated subjectively.

2.3.5 Lessac Kinesensic Training

Lessac Kinesensic Training (LKT) is a training style that involves the use of the voice, speech, body and mind with movement. It is better put as a feeling process – helping the actor/individual to sense the vibrations in the muscles and bones as they resonate in the whole body. Lessac (1969:119) writes that his training "is based on recognition and consequent control of physical behaviour patterns naturally produced when the body as a whole is functioning most efficiently". In kinesensic practice, the constant discovery of the significant centre of sensation of the voice and body it synergises. The body determines the importance of these perceptions and the actor/ performer/individual grows his voice and movement with them and does not copy or imitation anyone else and not even the trainer.

Furthermore, Lessac Kinesensic Training on one part employs the voice and speech of the actor/individual that consists of three energies felt in the oral cavity: consonant energy, tonal energy, and structural energy (tonal and structural are vowels). Consonant energy (Lessac, 1969) strengthens the association between each physical sensationwith another orchestral sound making it crisp as she develops the quality of her consonants by a feeling process, she strengthens the musicality involved and by so doing optimal vocal skills are achieved.

Tonal energy are felt in the short phonetic sounds /I/, /I˺/, and /eI/ but described by Lessac as "y-buzz" but in consonant energy/musical orchestra, it is the French horn. To employ

this energy (Lessac, 1997), the performer/individual has to continuously recognise with awareness that the tonal power of sensations are an inner occurrence – you must feel them within the body. The resonating vocal sounds that are experienced are from inside the body through the bony conductors – and organs responsible for speech productions.

Structural energy,(Lessac, 1997) which is the final aspect of the vocal energies, relates to the structure and form, size, and form the framework of voice and speech instruments. The main focus of this energy is to get an optimal facial posture. Structural energy "is the perception of certain muscle sensations and the kinesthetic memory of these sensations to establish a flexible, yet specific, form for the oral cavity, which is the vocal sound box" (Lessac 1997:119). Hurt,(2014:3) adds that structural energy creates eleven diluted vowels and vowel diphthongs that have a specific lip opening shape and/or size.

2.4 Application of Source Filter Theory to the Study

This study carried out among undergraduate actors at the University of Ibadan, Oyo State, and Obafemi Awolowo University (OAU), Ile-Ife, Nigeria was to investigate and examine the effects of LKT on the vocal skills gained by the participants after training, creating awareness and de-patterning from old habits. Based on the concepts of CBT and SFT that actors/individuals learn from self to self-teaching, the researcher and the research assistants with consultation from Certified teachers served to teach the participants ways to become aware of how their bodies work in preparation for a performance. In the course of the training, the training guide emphasised the need for organic growth of behaviour, cognition, awareness to develop the voice, speech, body and mind as an ongoing process.

It was expected that experiment will create in the participants, the knowledge, skills and consequences for imitating anyone. As the participants learnedand grew through self to self, they discover ways in which to help themselves and others without a forceful tact. The knowledge gained was for everyday and performance situations. The overall goal was to assist participants through rehearsal phases to performance while incorporating the knowledge gained. The expected outcome was to bring about a healthy voice, speech, body and mind into vocal skills. Participants assessed themselves based on listening to

audio recordings they made ofindividual sounds, linking the sounds to words, then sentences. They also assessed the duration of their performances at both phases.

2.5 Embodied Learning as a Model

Training the undergraduate actor in the educational theatre has suggested that certain guidelines and principles be adopted. The use of whole component of specific principles may hinder the optimal performance of actor's physiognomy, cultural and emotional stability. Also, training may come from a scientific or artistic point of view that may seem foreign to the actor. However, training styles must be embodied with a purpose, which in the long run represents a quality of idea of a whole process. Munro (2018)embodiment as a main learning modality has acquired prominence giving credit to the growth of neuroscience.

Embodiment has been defined by scholars as the identification with a physical entity of an abstract concept and the implementation of knowledge and information by the activity of our beings (MacLachlan, 2004; and Lindgren and Johnson-Glenberg, 2013). The body which is the main tool in embodiment is immensely relied upon through learning as informed by Lipson-Lawrence embodied or somatic learning depends on the understanding of our beings.In summation of embodiment, (Munro, 2018) in her research is theintentional and attentive concurrent self-consciousness with the internal and out environments.

While there are many conceptions of embodied learning that are relevant to philosophy of mind and cognitive science (Clark, 1999; Wilson, 2002; Anderson, 2003; Ziemke, 2003; Shapiro, 2007) there is a growing process that happens in each individual at different levels of learning. This learning is an active process that considers shifts, processes, and experience that result not in a mechanical process but how the body and mind, brain and the alertness of the undergraduate actor to change. There is a relationship with the body and the brain as existing theories highlight the body's wisdom suggestive of Lessac Kinesensic, (Rajvanshi 2011; Glaser 2014 and Porges 2009). Studies have been conducted in this regard and therefore created room for further research to probe actions, behaviours and performances of undergraduate actors as well as individuals.

2.5.1 Embodied Learning and Principles

In order to clearly define the basis for the adopted principles of Lessac Kinesensic Training (LKT) in this study, it will be adequate to briefly list the nine principles of embodied learning in a progressive state Munro (2018). They are as follows: Holistic Integration, Organic Congruencies, Personal Uniqueness, Sensory Awareness, Inner and Outer, Continuous Change, Habitual Patterns, Re-patterning, and Self-teaching. These principles when organically adopted into any form of training for actor will produce a resound and expressive actor. They principles are clearly replicated in LKT. It further details that there is a progression from the trainer leading to the trainee self-teaching to an ongoing process for a period or for a whole life time to tackle different situations.

2.6 Vocal Skills

In performance, especially in vocal life, vocal skills are predominantly considered as a matter of necessity in the view to assess the motor skills responsible for optimal performance by the actor and singers. The goal is to emphasise the effectiveness and clearly put, the appropriateness of these skills to performance for the delight and entertainment of the audience. Very often, educational theatre spaces, improves on one or more skills at the expense of others.

Studies carried out over decades lay emphasis onarticulation, resonance (Vervan and Wiles 2001; and Spivey, 2008), scholars get clearly details through acoustic properties from a spectral view. Clarity of diction, inflection, intonation, dialogue rendition (Hardison and Sonchaeng 2005), accent (Aaltonen 2020; and Armstrong, et. al. 2020), breath of which underpins pause and pace. Pitch continues to gain attention as this is determined by the actor and also the character she is portraying. Loudness (Pinczower and Oates 2005; and Tischler, 2010) has been synonymous with projection. It improves confidence, stage presence, and voice quality (Cook: 2012). This skill is of particular interest to the audience who yearns to hear the language, rendition and texture of the actors' voice(s). Therefore, attention is commonly given to this skill in an educational theatre as directors and actors fear distraction induced by the voice of a raging audience.

The study, in the section, committed the discussion to understanding of breath, resonance, pitch, loudness and articulation. These skills have been selected as they were observed in the acoustic data analysis of the study. However, the study provides avenue for future further research to what and how actor improve on these skills in an indigenous, social and medical perceptions.

2.6.1 Breath

Every living thing demands a vital tool and action for survival which is breathing. Breath is crucial to all living things and their activities, whether as humans, animals or plants. The breathing objective is to supply the body with oxygen while its waste product – carbon dioxide – is taken away through the air passage into and out of the lungs. We breathe or we die in the process of not breathing for a long time. Often, people hold their breath a while. Boston and Cook (2009:13) offer that we breathe "…at a rate of approximately eighteen times per minute, one thousand and eighty times an hour and twenty thousand nine hundred and twenty times a day" which may be cumbersome if one had to monitor that repetitive activity. We may have an incorrect way of breathing which in the long run has an adverse effect on our vocal life. Speech is always supported by breath as there are speech training approaches that agree with this view.

However, speech training tradition has it that breath is experienced as the carrier of speech. Linklater (2006:213) clearly states the responsibilities of the three large constituents of breathing musculature as,

> The diaphragm muscle is the primary breathing muscle; the home of the solar plexus; and the main receiving and transmitting centre for emotional impulses. The inner abdominal muscles and crura connect the diaphragm to the sacrum and the pelvic floor. They are responsive to primal energies and instinctive impulse. The intercostal muscles are responsible for capacity and are responsive to greater demand from the solar plexus and the sacral energies.

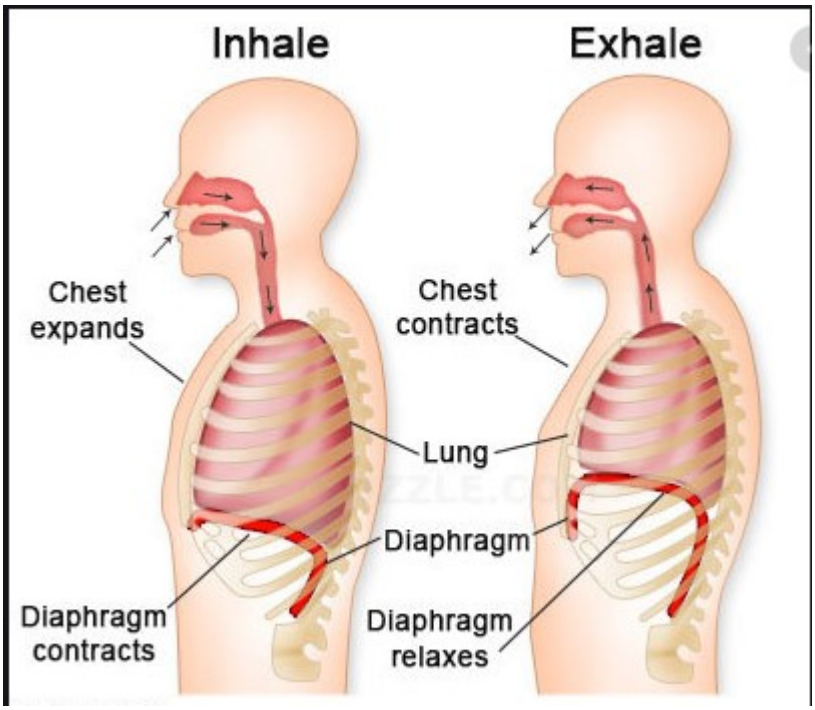


Figure 2.6.1a Diaphragm in Breathing Position

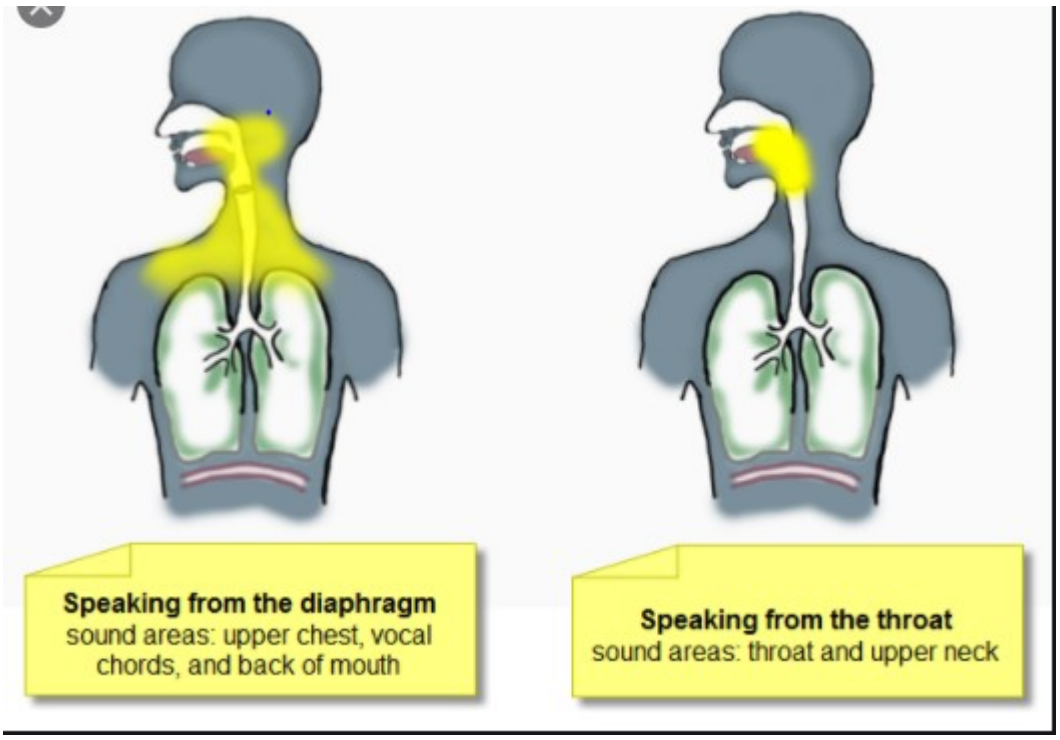


Figure 2.6.1b Diaphragm in Speaking Position

The diaphragm is an important speech organ responsible for breath and vocalisation as observed in figure 2.6.1a. Breath connects the performer to the stage and the audience, engages the teacher to her students, makes the lawyer convincing and persuasive to the courtroom and the client and it overall promotes good health for the patient or individual. Weil (1999:5) informs that 'when people ask me what single lifestyle change has the greatest potential for promoting good health, my answer is: Learn how to breathe correctly.'

Breathing correctly with the right muscles, good posture in sitting and standing, the desire to make meaningful and intelligible communication to the audience, may be representative of different speaking styles. It overall stabilises vocal life and may be hindered if inappropriate body postures are exhibited. Actor training is enhanced when the emphasis on breath control exercises, consciousness and the actor becoming aware of her mental, emotional and physical states. Normal diaphragm movements stimulate and normalise the solar plexus. This, in turn, leads to a normalisation of the breathing process and correspondingly reconstruction of the mental and physical conditions(Nakamura, 1981).

Therefore, breath is the carrier of speech by these assumptions, and "there is a belief that order of attention in speech training should be breathing first, voicing second, resonance third, and articulation last (Ling, 2002)". Titze (2016:91) opposes the notion, while he questions two aspects of breath in relation to vocalisation that,

> The role that breath plays in carrying the sound to the listener, once the sound is produced...The value (and reliability) of breath sensations we experience in our airways during phonation. The airflow we feel has little to do with the acoustic waves that propagate in our vocal tract and are emitted from our lips.

What the above observation by Titze (2016:92) may imply is that, unvoiced phonation or vocalisation cannot be carried by breath. To this, he buttresses his view with the following statement:

> The sensations of breathing alone do not help deaf children to internalise speech proprioceptively, but the sensations of voicing do. Feeling the buzzing sensations of acoustic energy, as Lessac....taught, are more reliable than the hissing sensations of turbulent air.

The above statements thus suggest that breath cannot be the carrier of speech in the case of deaf children and the hissing sensations are turbulent air. Additionally, proprioception is the feeling of the relative place and strength of the body of one's own components. It is usually described as the 'sixth sense'. In summarising his argument, good coordination of breathing and effectively speaking is nearly irreversible if the individual attempts a powerful and sustainable vocalisation. Enhanced voicing improves respiration and articulation as a by-product. Invariably, enhanced (by itself) breathing does not necessarily lead to other mechanism.

Voice practitioners give their views about breath, and how it appeals to emotions, thought and diction may shed light to how we may view breath in performance. As Linklater (1976) says conscious breath control destroys the sensitivity to altering emotional states and significantly reduces the reflex link between breath and emotional energy. The concept however, is what complements breathing to acting and a build-up of energies. Arthur Lessac's famous exercise "smelling the flower" encourages/invites actors to imagine smelling something that is most pleasurable to them to get the ideal breathing pattern. Glasheen puts it that: "this exercise enhances awareness of drawing the breath in deeply and freely, then continuing that connection into the exhale, or "pleasurable sigh" which eventually can be brought onto voice and then text" (2017:26). Cicely, on the other hand, describes it in the image of touching. "The sound off with breath is like a drum...familiar with the feeling of the sound springing from the diaphragm" (1973:26). Just as Lessac and Berry describe it as a sensing or feeling process, Linklater also

describes breath and emotion as a “sigh of relief” which eventually transitions from breath to touching a “pool of vibrations in the lower half of the torso” (2006:36).

In conclusion, three voice practitioners summarise breath and speaking in distinctive ways. Berry states that: “we perceive that how we breathe is how we think; or rather, in acting terms, how the character breathes is how the character thinks (2000:26)”. The breath must include the thought for the speaking voice, it is no longer or not necessary; the energy of the thought is precise. Linklater adds that “every change of thought has a change of breath (2006:139)”. Therefore, the thought is organic only when the breath is deep inside the body, and only then is an actor deeply involved enough to make communication meaningful. Rodenburg (2002:170) comparing it to physical and emotional realisation states that: “the breath is linked to the length and quality of the thought and feeling”. What this does conclude is that, even one has a different breathing pattern that changes under different circumstances or situations. Our transformations of physical and emotional states are reflected in respiratory discoveries.

2.6.2 Resonance

Resonance is the method through which timbreand/or intensity of the fundamental product of phonation is improved by oxygenated cavities (pharynx, nasopharynx, nasal cavity, oral cavity) through which it passes on to the outside atmosphere. For this acoustic energy, the vocal tract acts as resonating cavity. Resonance is generated through the pharynx, nasal and oral cavities when the sound waves produced by phonation and goes through the bones and structures that accommodate the speech articulators. The size and shape of a person’s vocal tract and its boundaries directly influence the sound quality (voice) that is inadvertently perceived by the listener. The laryngeal’s pure sound is thin and weak in itself (Khambata, 1977). When the sound passes through the pharynx and mouth, these natural resonators strengthen it (Greene, 1972). The resonator is consequently a specific body that responds to a certain frequency known as resonant frequency.

Frequency in acoustics is a term commonly used to refer to sounds that have different range of tones (Greene 1972) and the effective resonating frequency is known as the “bandwidth” (Ladefoged, 1960). The resonator functions as a filter by strengthening the

effective frequency within the band width. The higher the frequency range, the crispier the quality or resonance of the speech. The understanding as argued by (Minifie, Kixon and Williams 1973) is that the oral, nasal, and throat cavities are the most effective resonators, and that the chest cavity only supports what is realised. However, Khambata (1977) says that the parts of the chest like the sternum aids as a soundboard in vocalisation. Just like other organs responsible for speech production, the pharynx is a major resonator that sits aback as it alters in depth with the movement of the back and root of the tongue as pitch rises and falls. Formant which this current study does not address causes modification in the shape and size of the pharynx as a resonator. The formants range from individual and at large the way the oral cavity is employed.

2.6.3 Pitch

Pitch is the auditory related frequency of the vibration. The frequency of the vibration is explored and analysed for precise acoustic discoveries. The regulatory part of the vocal folds that opens and closed creates the emerging sound. It is generally considered that the length, mass, and tension ofthe vocal folds (often misconstrued as vocal cords) determine the vibration frequency of sounds. Frequency is viewed as the increase in tension of the voice and the decrease in length and mass (LadefogedI960).Boone (1983) opposes this view with the claim that short folds vibrates slower than a long ones. Another argument by (Khambata 1977) isthat the vocal cords vibrate sequentially. While Greene (1972) holds that the different frequencies are as a result of vibrations called overtones. The increases in subglottal pressure willbuild-up pitch. While Sears (1977) sums this section with two things: Bernouille force and the sucking action of the glottis, occur mainly within the chest cavity when the folds are relatively thick and present a longer restricted passage to the air flow.

2.6.4 Loudness

Acoustics studies explain loudnessas adefinitive perception of sound pressure. Often times and studies have all agreed and shown (Knight 2012; Master et al. 2008; Linklater 2006; Rodenburg 2002; Mayer 1968; Lessac 1967 andMachlin 1966) that actors are markedly differentiated from non-actors in loudness as the demand to fill the theatre with their

voicesduring performances. Loudness are commonly observed as attributes of energies in vocalisation, muscle tension, articulation, intelligibility, articulation and all these are described extensively in voice and practitioners as projection of the voice. Broadly, the auditory sensation attributed is described which Lessac opposes to. For him, projection as a form of loudness will invariable mean throwing one's voice rather than allowing it to resonate within the individual an thereby allowing the none conductors to aid the journey of reaching out to the audience.

However the relation of physical attributes of sound to perceived loudness consists of psychological, physiological, and physical compositions. How linguists and speech practitioners perceive of loudness is in relation to duration of sound, sound pressure level (SPL) and frequency subject. Stevens' power law in which SPL contain an exponent of 0.67 can approximately be in relation to the entire SPL and the loudness of a single tone.With precision as result, studies continue to indicate that loudness improves with a greater, lower or elevated exponent, and a lesser moderate exponent.There is a confirmation by Boone (1983) that intensity or loudness is relative to what is experienced in transglottal and subglottal air pressure. When the pitch rises, amplitude decreases and vice versa or it may be the reverse (Kambata, 1977).And this discussion closes with viewpoint of (Sears, 1977) that the efforts we make in vocalisation are products of certain intensity level,and are mainly condensations of our overall musculature, gesticulations and experiences.

2.6.5 Articulation

Articulation has been a paramount aspect of consideration in vocal training. Articulation is the way organs of speech productionoperate for encoding by a speaker and decoded by a listener. Modifications vary from language tolanguage and from accent to accent and considering idiolects havea major contribution to articulation. This means that vowels change, consonants change for phonological realisations in languages. In Ladefoged and Maddieson (1996) there are a number of characteristics describing the relationship between the section and the type of phonetic variation, while articulation leads to supra-laryngeal activity.Generally, the nature of articulation is classed by manner and place of articulation, the voicing, and the extent of the laterality. While this is so, Laver (1994)

describes it in the cavity where it is situated, the organs that move to different directions, the shape and height and placement of the tongue which is more responsible for the vowel realisations.In summation, voice quality as a factor does not have much to do with articulation as personality, agility, what the actor/individual hears and how it is produced influences the phonation in the vocal tract.

2.7 First Language

First language is linguistically implied to mean the first language of communication between a child and the parent. It may necessarily not be the language of either parents but rather a language of instruction that can be dominated by the community in which an individual is living in. First language which is the speech of an individual develops with the individual until she is able to independently manoeuvre the nature of the language. The development of voice and speech in the acquisition of language begins at infancy. Weiss (1992:101) supports the view that, "this development ceases when the child becomes proficient in the mother tongue". Obviously, the characteristics of voice and speech, the temperament, anatomy and milieu of voice and speech as a first language or mother tongue is well developed from the womb through the genes of the parent. About the time that a child moves to elementary school, she has almost become a sophisticated user of a language with great communicative skills (Yule, 2004). Jowitt (2005) observes that there is less support for indigenous languages in Nigeria regardless of the implementation policy of mother-tongue (L1) being the medium of communication and instruction in the primary education.

2.7.1 Interference of First Language in Performance

Often do we find individuals – the study's target group – undergraduate actor, in a situation where there in an interference of first language (L1) on the actor's performance. These interferences range from the phonological process of the L1 on the language of the text. Attempting to be intelligible in the realisation of an accent, may result in the shifts/movements of the vocal tract, muscles of expression but may still be far from perfection. This aspect of the study does not neglect dialect, accent, or idiolect of actors but stresses the need for actors to use it to the aesthetics of any given performance. People often get misinformed about accent and dialect. Accent is restricted to a variety of

pronunciations of a language, while dialect on the other hand, blankets the grammatical and vocabulary of a language. Lyons (2009:269) informs that, “everyone speaks in one dialect or another, just as everyone speaks with one accent or another”. What can be deduced from this statement is that a people can speak the same way with strikingly different accents. The crux in adopting it to performance space is to be as intelligible to the audience as possible.

Therefore, Lessac Kinesensic training encourages a speaker to honour her accent as this is her identity. She must do exploration exercises that will help her teach herself to be intelligible to her audience without any form of accent reduction. Interference may set in but the ability to carry her audience along with the message of the playwright goes a long way. Lemmer (2014) study supports this discourse as she explores the contemporary South African perspective from two angles: the relationship between inclusivity and language where there are over ten official languages while English serves as the lingua franca. Using western Shaw’s play, she tries to address the impact on identity, linguistic/paradigm shifts as second language users and the various contexts observed and the study further examined code switching. Investigations on code switching among actors and students (Weinreich, 1953; Macaro, 2005; Ustunel and Seedhouse, 2005; Lin, 2008; Uys and Dulm, 2011;and Richardson, 2015) continues to be an avenue on physicality and pluralistic backgrounds in actor training for the discovery of personal and linguistic uniqueness which begs to be embraced without implications.

2.8 A Biography: Arthur Lessac

Lessac kinesensic is a voice, speech, body and mind work that helps an individual, especially an actor, to discover and explore the body and mind through a feeling process in a healthy way. Arthur Lessac was an American pedagogue of a voice, speech, body, and mind pedagogy known as kinesensic approach to training. Lessac coined a term called “kinesensics” for his pedagogy and defines it as an inherent feeling/sensing process which the main target of energy qualities that are perceived and felt physically with a long-term result of creative and productive expressions.

There are many written accounts of Arthur Lessac's biography and all are one and the same. Hurt reports that:

> Lessac dedicated his life to vocal and physical development. Born in 1909 in Palestine, Arthur came to America in 1911 with his parents, who soon divorced and left him as an orphan...Lessac earned a small voice scholarship and gained his first professional training in breath control, musical rhythm, and operatic singing (2014:3).

Certified Trainer Sean Turner, gives detailed numerous significant accounts that changed Arthur's life and shaped his pedagogy:

> First, while at Eastman, Arthur was able to study with Professor Bernard Kwartin, who was a famous specialist in methods of voice pedagogy, including experimenting with feeling the correct sound rather than hearing it, which is noted in Kwartin's (1941) book *Fundamentals of Vocal Art*. Second, during his third year at Eastman, Arthur was having difficulties with his "upper register" and repeatedly complained to the Dutch maestro Adelin Fermin, asking for help. …"Arthur, one morning you are going to wake up and it will be there," which signified the end of the teaching session and the extent of the help he was prepared to give [Lessac]... The inability of his Master voice teacher to "teach" him made [Lessac] question the extent by which the school had anything left to offer him. Third, as he would eventually discover his own upper register while singing in a hotel later that year, he began to realised that he was able to teach himself, both of which [events] helped influence his decision to not return to the school after his third year (2009:21-22).

In 1937, Lessac snuck into an audition of the Labour Stage Theatre's production of *Pins and Needles*, a show produced by members of the International Ladies' Garment Worker' Union. Lessac was hired as a singer in the ensemble, but the director fired him when he discovered he was not a union member. However, Lessac's work with the production did not end. An old acquaintance affiliated with the production told the director that Lessac would be a valuable addition to the group and the director hired Lessac to be part of the teaching staff. His work in this production launched his career in the professional theatre as a voice trainer. Lessac remembers giving the singers "ideas about sensation" to keep a clear, consistent and resounding healthy vocal habit and positive lifestyle. Lessac made his presence known again in 1939 with his appearance of*From Vienna* by the Refugee Artists Group, a company of Austrian actors. The show's previous vocal coach left out of frustration from working with the actors' inability to speak intelligible English. Lessac, always embracing a challenge, took the job six weeks prior to opening night.

For Lessac, humming became a tool for teaching and helping non-native speakers of English actors to resonate and articulate sustainable sounds especially consonants intelligibly. The show was well received and reviewers particularly noted Lessac's work, thus earning him prestige in the area of "accent reduction." Famed *New York Times* critic Brooks Atkinson wrote, "They speak [English] more carefully than a good many actors for whom English is the native language" (July 1939: X1). Lessac remembered that "he had to feel his way to making discoveries, which led to a certain type of problem solving that would eventually lay the foundation for [his] books. In 1941, Lessac earned his first degree in Voice-Speech Clinical Therapy at New York University (NYU). Lessac opened the National Academy of Vocal Arts (NAVA) in 1944 and hired a teaching staff to help him offer courses in speaking, radio technique, special speech and voice study for actors, public speaking, and accent reduction, as well as specific educational programmes: in performance, from pre-school to junior division, elementary, intermediate, and advanced levels, all of which incorporated performing, coaching, orchestra, dance, music, acting and individual instruction (Turner, 2009:29-31).

As a result of his desire to make a difference in the vocal world, Lessac continued to teach his practice and principles to improved vocal life. His main goal was not to read to them but to help them commune the intent to the congregation through their vocal expression. What is goal was, was to make them to be as convincing and intelligible to the audience in any given space. Hurt (2014:4) further accounts that he conducted lessons that "inspired the students not to imitate an admired rabbi and orator in their school, but to find the passion with the text. Through his teachings of the feeling process and communing with text and spirit, students discovered their individuality in expressing their sermons".

Of great significance in Lessac Kinesensic training is the ability to playfully communicate a text to the audience through vocal artistry. Imitation is debunked as a learning process and individuals, as actors, singer, public speakers during workshops, are able to discover themselves through a feeling, sensing and tasting process. Lessac's teaching evolved over time to not only working with actors and singers, but also with speech and voice therapy patients at Bellevue Hospital and St. Vincent Hospital where he used his feeling process.

After obtaining his first degree, he went on in 1952 to earn his Master's degree also in Voice-Speech Clinical Therapy from his Alma Mata NYU and continued working with Bellevue Hospital and St. Vincent Hospital patients throughout the 1950s. Lessac established a large clientele working on a range of voice and speech issues. Lessac being a resilient person, continually problem-solved with each of his students, finding ways to help their voices through the feeling of sensation.His books and trainings continue to inspire lives and change the training of voice, speech, body and mind in the vocal world. His workshops spread from within the United States of America to other continents including Africa. The work was originally domiciled in the US and shaped for the American actors, singers, and human communicators but due to the flexibility and fluidity of the pedagogy, it continues to impact different tongues without the imitation/cognitive process but a feeling experience. As it continues to meet the demand of the professional actor, it found its way into the academic world among the educational theatre space.

Hurt (2014:5) reports that:

> Lessac continued developing his work every time he taught and never called his work a "method" or system." Lessac called it "our work," which encompasses his spirit of sharing the work to all people, including disadvantaged groups at varying times in America throughout the twentieth century. To this day, practitioners and certified trainers simply call it "the work" because it is a practice that one tends to each day… Lessac made an important shift in the third edition when he changed his term for the main components of his work from "actions" to "energies" to encompass the spirit of the work as an energy one feels in ways that are larger than a series of actions one does. He continued teaching his voice, speech, and movement work in his summer intensives until 2000 at the age of 91. Lessac taught until his death in 2011 at the age of 101.5 years old.

As his work continues to grow, it yields a self-discovery through an organic approach. It is mainly a self-to-self teaching in voice, speech, body, mind and movement. Lessac Kinesensic is a pedagogy that is a reliever and a healer through self-awareness. It is a process of discovery from the inner environment to the outer environment and vice versa.

2.8.1 Introduction to Lessac Kinesensic Training

The theory and praxis of any training in an educational theatre is possibly to situate it in a context that meets the demands of the trainee and to understand how knowledgeable the trainer is about the teaching of a method or pedagogy. Turner (2009: 375) defines pedagogy as:

> …either the art or science of teaching, and as such, has significant political, social, and economic implications for those who are being taught. The teaching of voice and body is no different.

The art and science of voice and speech is to consider the implication it is likely to have in the individual, in performance context and real life. Life itself is energy. 'Breath is energy that fuels us' (Hurt, 2014:22). Energy is not something that can be seen but rather felt. It is a phenomenon that radiates when optimally utilised. Everything we do demands energy. The singing voice demands energy in order to reach a high pitch, key, sustain a note and make her voice reach the last row in the theatre. The scenario is somewhat the same for the speaking voice but with a little digression. Crockett (2012:2) posits that:

> The speaking voice must gain this skill if she wants her speeches remembered and if she wants to gain the admiration of the audience. Since we know that emotion takes energy, the speaking voice must learn and practise the skills needed to be effective.

Lessac Kinesensic Training is a pedagogy that employs the use of energies that are perceived as actions. These energies are in two parts: vocal energy or body energy. When this is experimented upon, it develops an embodied actor application for underpinning and enhancing undergraduate actor vocal training. Under the two energies, Lessac training distinguishes the vocal energies into three forms: Consonant, Structural and Tonal, while in the Body energy, he groups them into four parts: Buoyancy, Radiancy, Potency and Inter-Involvement. These energies develop the undergraduate actor's body and mind for vocal expression. Unlike Crockett who posits that its goal should be to consciously achieve the sole aim of gaining admiration from the audience, Lessac argues that it's when these energies are explored; it is for her to ask herself if she feels good about her exploration in preparation for performance. It requires an awareness approach which will result in a well-developed total human instrument. If otherwise, it will lead to frustration and throwback to old habitual patterns that will not develop effective vocal expression skills. It may result in a complex outcome which one can term an intellectual process – 'a cut to chase'- if well integrated, it will be beneficial to the actor and the audience. The observation is that when the principles of a pedagogy is not lucid and well embraced, it becomes complex in theatre training.

This study has considered various definitions of voice and speech and how they relate to the acting for the stage. Morrison's definition may be true in the light of the undergraduate actor understanding the human anatomy or organs, i.e. bone, tissues, muscles, posture responsible for vocal expression. However, the purpose of speech in the theatre is to perform and communicate to an audience who may be able decode the accent, mood, energy, character and the language of the dialogue. Major aspects to consider in the training for vocal expression are the human anatomy responsible for shaping sounds, muscles for expression and neurological components responsible for change in human behaviour. Many practitioners of voice and speech anchor their training on an intellectual process which may be rigid depending on how it is taught to the actor; it can also be a hindrance for her to equipping herself to new acting approaches. Hurt (2014:1), through her years of actor training informs that:

> It never occurred to me to approach acting on a non-intellectual level. This resulted in a disconnection between my cognitive understandings of the process and my physical portrayal of the character – i.e., the acting! I always thought my mind was supposed to learn movement and then coerce my body into imitating my teachers.

Hurt is a Lessac Certified Trainer and has taught acting and Lessac Kinesensic training at colleges across the United States. In her doctoral research which she later published and discussed the personal challenges and growth she encountered as an actor as well as integrating Lessac Kinesensic to training and teaching. Many vocal practitioners face similar challenges in embodying actor training personally before going on to communicate their own experiences in a way that would assist the undergraduate actors who relate to acting trainings differently, especially to the vocal demands. This study discusses the implication and application of LKT to the Nigerian undergraduate actor training. The emphasis of the application is not to encourage an imitation process which will not be embodied in actor training.

The present study discusses voice and speech training and actor training because the subjects for the study are undergraduate actors. Actor training and voice and speech training continue to crisscross but there are places where they intersect. Saklad (2012:12) records that:

> Both seek a connectedness of self-self, and of self to other, to the moment and the audience; both seek clear communication and connectedness to the dramatic piece and the imaginary world of the play; both emphasized the importance of the actor's groundedness, healthy alignment, strength, dexterity, stamina, physical freedom, and an expansive range of expressiveness.

Although this may be contextualised as an integral part of the whole process of voice, speech, body and mind training, it is also worthy to note that undergraduate actors hardly develop on their own without the instruction of basic principles of a pedagogy. There are also factors that may be militating against her fluidity and flexibility in character portrayal/development. This may be conditioned to how responsive her body and mind are to new trainings/approaches – breath, posture, movement through space, and connecting energy and emotions to others on stage. The major gist of any vocal training approach is for connectedness of self-self and self to others, to the moment and to the audience. Many pedagogical tools aim at an intellectual process: a method to arrive at a problem, thereby creating another problem if not done creatively (due to lifeless pedagogies) that leaves a lacuna for other pedagogues to develop models to meet specific demands of the actors. Lessac pedagogy aims to teach the actor, individual, performer and instructor to explore ways that will make her feel good inside out. Lessac Kinesensic was developed by Arthur Lessac.

Hurt (2014) Arthur Lessac was a developer and pedagogue of voice, speech, body, mind and movement he communicates to interested learners as kinesensics training. His pedagogy uses the whole human senses and one he calls inner harmony; the harmony within the body. His training encompasses more thancurrent training, the training engages

an individual/actor learn from his old habitual pattern, physical behaviours and how the whole function for a positive goal in what can be described as playfulness with clear intent from self-to-self and self- to-others.

Kinesensic is a term createdto describe how the energies in the human body are expressed physically and psychologically in a process of working towards a creative process for actors, speakers and singers. Expression comes from the response the actor can readily relate to her habitual patterns that she struggles to get rid of before retraining them for creative purposes. According to Lessac,kinesensic is better described as a neurophysical sensing/feeling process with four main parts to consider – movement; basic meaning and cognition; inner and outer energies and occurrences experience from childhood – that are daily tapped for every use and development.

The Kinesensic feeling process becomes a built-in tonic control factor in human instrument development. Hurt (2014) Kinesensic as a pedagogy engages with continuous discoveries of the important sensation in the body, voice and speech of the actor and how they collaborate to the success of an actor and not mere copying/imitating another person for a definite goal. We all started speaking different and we are from different genetic composition but we have the same human likeness.

Copying, which can be likened to imitation, is a common norm or habit by undergraduate actors as well as vocal practitioners. Nevertheless, if the actor is not allowed to imitate, there is a huge demand from her as well as from her instructor due to her vocal artistry. Knight (2012: ix-x) reports that the needs of the actor within performance are ‘constantly changing and are never fixed... Saklad (2011:13) also adds that, in the midst of a very fast-paced world, with its “gotta get a quick fix” mentality, teachers run to keep up with the changing needs of the students. If intelligibility is what the actor has to focus on for effective communication in performance, how then does the undergraduate actor achieve this in a convincing manner? Crannell (2012:1275) corroborates one of the common characteristics of poor vocal habits, unintelligibility results from not being aware of salient sounds in speech delivery which may be as a result of duration, pitch, loudness and articulation. Lessac describes intelligibility in relation to consonant sounds that create

room for intelligibility. Just like the spinal cord is the vital part to uprightness in the human body – how we sit, walk, stand, dance – so is the consonant to vocal communication. There is need for a healthy way of speaking and communicating our thought and diction to others.

The essence of vocal training during actor training for undergraduate actors in educational theatre is mainly to solve major problems (habitual patterns) they encounter as well as research into the voice, body and mind that will synergise the actor to her character for character portrayal development. This can be termed as a 'transformative and restorative value' Moraitis (2009:387) defines this as:

> A value of vocal training widely recognised in theatrical environments where the training focuses on unlocking habitual tensions that impede creative communication and allow actors to alter physical and vocal behaviour.

Lessac Kinesensic as pedagogy describes the habitual tensions as destruct patterns. As part of its principles termed 'body wisdom' and 'vocal life', habitual patterns are also known as destruct patterns which have the power to force the attrition of body wisdom. These destruct patterns stem from:

- A loss of relationship and empathy with our body organism and a loss of qualitatively communicating with it;
- The conditioned patterning of our perceptive capacity and general body functioning by outside constraints, inhibitions, and super-imposed standards;
- The premature deterioration of body's systems and Stradivarius talents due to misuse or non-use, which generally leads, unknowingly, to imitation, suppression, surface functioning, and extrinsically-ordered behaviour (Lessac, 1992:250).

The fact remains that the undergraduate actor has the capacity to rediscover, perceive, and coordinate all the body's inborn potential which does remain a natural and embryonically instinctive one. She has the potentials to reiterate, through retraining which is still reclaimable, will learn to build upon her body intelligence and body languages and establish a foundation for awareness that may be characterised by going beyond habitual patterns to becoming flexible, fluid, and focusing them to the day-to-day need for positive and healthy progress. This progress is an organic communication that represents and stresses a special type of physicalised body intelligence which benefits as well as creates behaviour, actions and attitude through an awareness process.

2.9 Psychophysical Approach

In understanding psychophysical approach, it will be adequate to briefly discuss the proponent of psychophysics in order to ground the study on awareness and sensing process. An investigation into how the sensory process evolves awareness in communication begins with Gustav Fechner's (1801-1887) theory of psychophysics. It is concerned with a transformation from the physical to the psychological. It is a response from the way we feel inside out. And as actors: how we translate these feelings to make energies in performances. It, examines the relation between physical stimuli and feelings and their perceptions. Scholars (Link, 1994) describe psychophysics as the scienceresearch or more entirely, as an assessment of perceptual process by examining the impact on the experience and behaviour of a subject.Psychophysical approach combines sensory ability notion with the choice and strategies that allows a person as an observer to maximise effectively a challenging assignment rather than attempting to define a limited threshold.

2.9.1 Principles of Psychophysical Technique

To understand the relationship and benefit of Lessac Kinesensic as a psychophysical training, it will be important to quote in full the commonly held principles of psychophysical techniques:

> All of the approaches encapsulate the undergraduate actor's
> mental and psychological state.

> They all involve, to a greater or lesser degree, some reorganization of the individual's consciousness.
>
> When these techniques are properly executed, it is possible to promote deep and profound changes in the undergraduate actor. The application of many of these methods can be both potent and subtle.
>
> Psychophysical techniques seem to provide immediate access to deeper blocked areas in the undergraduate actor that may previously have appeared to be relatively inaccessible.
>
> Neurologists have stated that most individuals use only 5 to 10 percent of their full mental potential. These techniques usually enable the individual to experience a greater percentage of potential.

These techniques help to release the undergraduate actor in creating a clear and effectivebody and mind unity.Most of these approaches have an impression on the actor's awareness and inner self. The individual as an actor frequently experiences to a large extent of self-awareness and personal autonomy, i.e., a sensing of feeling "centred."

> None of these methods strives for relaxation per se, because relaxation tends to be viewed as total collapse. These methods attempt to propel a distinct and heightened and an unambiguous awareness in the individual.

Most of these techniques give room to the actor as awareness to freely function as a result of the degree of muscular and psychological engaged with.

> Almost all of the psychophysical methods stress an altered relationship of the body in space.
>
> All the techniques stress that neuromuscular habits can be permanently changed and the body's flexibility can be enormously increased.

> Most of these approaches encourage modification of the participant's (undergraduate actor's) mental attitude (Park, 1997:1396).

The above psychophysical principles consider the mind, body, attitude, habitual patterns, self-awareness, sensing, breath and relaxation, freeing muscularity, and space as the function in performance space. The supposed intention of psychophysical training as it relates to Lessac Kinesensic is to engage the actor to 'let go' of habitual patterns in posture, emotions, enhance sensorial awareness within the body and the stimuli of the outer environment, breathing, retraining old habits to a positive good – familiar event, organic instruction, inner harmonic sensing and body esthetics (a term coined by Lessac to mean something with purposefully promotes a sensation orstimulates awareness). Lessac Kinesensic is not about being self-conscious of the exploration, rather, being aware of what is happening and afterward. It is a psychophysical training.

> This training aims at skilful use of the voice and body energy states rather than at developing new vocal habits. It works qualitatively rather than quantitatively; works for carefree, not careful vocal use; develops the voice simultaneously for speech and singing; and is a self-teaching journey of discovery (Park, 1997:1398).

This should be effortless but often the undergraduate actor belabours her vocal skills on reaching a goal in pronunciation, articulation, and projection and attempts developing new habits rather than retraining old habits for optimal creative purpose. Lessac Kinesensic training will help her to focus on exploring her body, mind for optimal use in terms of resonance, musicality, energies, emotions, articulation and pronunciation in isolation for performance space and real life situation.

2.9.2 Psychophysical Approach to Actor Training

The study of voice, speech with regards to character development in this research is from a psychophysical perspective. It is a perspective that hinges on psychophysical training;

training based on perception and awareness in that it encourages positive behavioural change in the actor personally, while rediscovering and retraining rather than imitating an instructor or teacher of voice and speech. Furthermore,

> The study of speech perception is a behavioural science. The essential elements and assumptions of the methodology are the same as those in other behavioural sciences (Kintsch, Miller and Polson 1984). The key element of research in behavioural science is to make repeatable observations. In speech perception this requires maintaining control over the details and conditions of stimulus presentation, the responses or task required of the listener, and any attributes of the listener relevant to the task, including instructions (Lass, 1996:526).

Psychophysical is from the word psychophysics and a part of psychologythat deals with the connection between physical stimuli and their subjective perceptions. Kingdom and Prins inform that:

> The term psychophysics was first coined by Gustav Theodor Fechner. In his *Elements of Psychophysics* (1860/1966) Fechner set out the principles of psychophysics, describing the various procedures that experimentalists use to map out the relationship between matter and mind…Psychophysics can be applied to any sensory system, whether vision, hearing, touch, taste or smell (2010:1).

The sensory system of psychophysics applied to acting is psychophysical. As Corrigan points out, many voice teachers currently employ psychophysical techniques when teaching voice production because these techniques are methods which engage some aspect of a person's physical, mental, or emotional functioning (1997:1222). Webster's Dictionary defines psychophysical as 'when we conceive physical and psychical

stimulation to exist together; a sharing of mental and physical qualities'. Psychophysical techniques demand the incorporation of the body, mind, imagination, feeling and perception inside the actor's body and her environment. Hurt supports that psychophysical training is that training that 'involves mind, body, spirit, awareness, imagination, feelings and breath (2014:12). She further stresses that: the actor tunes into her breath and follows it while meditating on her psychophysical processes, including how she feels emotionally and physically (Hurt, 2014:22). However, if an actor lacks the understanding of optimal use of these aspects mentioned, she is likely not to reach the goal to be attained as a well-coordinated and developed actor.

There are a couple of pedagogies that employ psychophysical training (Kootte, 1984) such as: Yoga, T'ai Chi, Chi Kung, Aikido, Suzuki Method (Zarrilli, Daboo, and Loukes, 2013; Madden, 2002) Feldenkrais Technique (McCaw, 2019), Alexander Method/Technique (Corrigan, 1997); (Madden, 2002); Stanislavsky practice, Rolfing (Engel, 2008); and Lessac Kinesensic (Carter and White 2019; Haarhoff, 2018; Cazden, 2017; Hurt, 2016) and a handful of 21st century pedagogies. Stanislavsky practice which is often used by undergraduate actors have been misinterpreted to mean a 'get out of your head', 'don't think, do' pedagogy. Acting teachers often presume his work was largely about the psychological investigations of character, observation and text analysis. Hurt further clarifies that what they lacked in their teaching is:

> The incorporation of the actor's senses, use of meditation and concentration on self and surroundings at once, and recognition that Stanislavsky's foundation comes from the use of imagination as felt throughout the actor's whole self, not just seen in the mind's eye (2014:).

Stanislavsky's practice as an actor-training: the method focuses on experiencing, not just thinking, feeling and reflecting. It demands the actor actively engaging her whole self through each of her actions and how she relates to surroundings and other people. Blair adds that Stanislavsky set out a six-stage process:

> Stimulation of the "will" to create a commitment to the text; the use of personal material, i.e. emotion and sensory memory, connected to the text; the merging of the actor's personality with the character's; physicalisation, in which the actor finds the embodiment of the character; integrating these inner and outer aspects of the character; and delivering this effectively to the audience (2008:30).

Psychophysical practice is a stimulation of feeling, emotion that comes from a well-developed meditation that derives from learning from the inner self to the outer self to which co-actors and the audience that can relate. Feeling arises from action. It is not what we can do but, as Corrigan puts it, psychophysical practice rests on a belief system that is imbedded in a question of 'not what we can do, but what we think we can do' (1997:1270). These pedagogies do not advocate for tension from psychological to physical. They encourage creativity at its optimal level. Merlin states that breath has a great deal of contribution to training.

> If your physical body is tense, it's quite likely that your psychological apparatus is also tense…Once you're in a state of relaxation, your body is much more likely to be at your creative beck and call, and (looking at it from the other way round) if you're physically relaxed, you'll probably be more psychologically open (2007:32).

Lessac kinesensic consists of three energies felt in the oral cavity: consonant, tone, and structural. Consonant energy "sharpens the perception and expression of the individual qualities of the consonants by an association of the physical sensations of each one with a different instrument of the orchestra." The undergraduate actor aims to learn her consonants and vowels by feeling the inherent musicality through sensory explorations.

According to Shapiro (1994:47), "Fechner's view about psychophysics has been retained by psychophysicists and they retain that claim to be searching for laws relating our

sensory experience of the world to physical magnitudes in the world. Treisman (1964) offers a neurological interpretation of psychophysics, according to which psychophysical equations relate neural states to stimuli." Stimuli in this research is to study how undergraduate actors respond to what they feel when developing voice, speech, mood, imagination, feeling and breath through the three energies felt in the oral cavities. In Lessac training, when an actor employs the feeling process, it results in an explorative process where she has to trust in her natural self – body and voice and speech as opposed to imitating or following a cognitive process. Lessac (1997:1) adds that:

> The artist must have the knowing and the feeling of how the body's systems work and how its creative instrumentalities function. The artist must acquire this inner intelligence and experience with gutfelt and heartfelt awareness; he or she can have the technical knowledge of these fundamentals but can understand them organically and vitally only by physically experiencing the feeling while at the very same time behaviourally feeling the experience.

In actor training, there are stages in character development which is commonly attained through intellectual process and it is intended to develop many abilities and talents in the undergraduate actor. Knight (2012:3), describes that the actor is an enactor of human behaviour, a scavenger of all behaviours and therefore of all speech actions. The result is that there is a world of difference and phases of undergraduate actors' work in vocal training; this may vary inadequately representing the level of her performance due to vocal habitual patterns to change and how she understands the way in which her body works. Lessac presents four concepts that are integral to "vocal life" actor training: Body esthetics (as differentiated from body anaesthetics), Inner harmonic sensing, Organic instructions to body, and the "Familiar event" principle.

These concepts may be difficult to grasp on first attempt but with patience and openness to playing and having fun, she learns to accommodate and utilise them. They function from

an environment of two worlds called the inner and outer environments. According to Lessac and Kinghorn, (2014:7)

> On the one hand, there is a huge outer environment, with everything and everyone else in it: its widely varied cultures, its unexplored territories, its powerful energy forces (nuclear, electrical, solar, water, etc.), and its conditioning and patterning, which shape the way you think and act. On the other hand, there is your vast inner environment, with only you in it, your personality, your unexplored inner wilderness, and your intrinsic body energies which promote vitality and create health and well-being.

Suppose that without the application of psychophysical training, she gradually experiences these four concepts through her vast knowledge of basic vocal training which may not be satisfactory but that at the same time her practices in vocal life are below standard as her two worlds are not harmonising with her performance, she falls into a risk of poisoning her environments. It may easily happen that her excellence in the one respect may sufficiently overbalance her deficiency in the other to cause the voice and speech instructor to give her a satisfactory build-up. Thus undergraduate actors may pass through various instructors who may be certified (as the term is often used to practitioners of vocal training) instructors or 'an oral tradition' instructor without being compelled to correct her most glaring errors in vocal delivery for effective communication, as this is the goal of vocal communication, resulting in poor vocal artistry. To be sure, the instructor who painstakingly puts the undergraduate actor through rigours of exercises for only pronunciation without helping to develop the mind, body, spirit, awareness, imagination, feelings, energies and breath for performance space or real life situation has not achieved much in vocal development.

The goal of LKT as a psychophysical approach focus is at helping the undergraduate actor establish a more effective voice, speech,mind and body unity through sensorial awareness.

It provides a psychological reorganisation to be less conscious of what she is exploring but over a long period will reap the benefits of what has transpired in the whole body and mind through a self-awareness approach. With these considerations, undergraduate actors will understand the benefits of training the voice, speech, body and mind towards performance and healthful living. Any pedagogy devoid of basic tools for an embodied actor training for present and future performances will create a gap for the contemporary actor.

Three main things that are paramount will guide this study: LKT principles, pre training and post training for acoustic and perceptual analyses by experts. To achieve this, the study will focus on the following selected principles of LKT:

- The Human "Musical Instrument" Principle
- The Principle of "Inner Harmonic Sensing"
- The Perceptive Awareness" Principle
- The "De-Patterning" principle
- The Feedback Principle

One of the purpose of this current study was to encourage undergraduate actors/individuals to be substantially grounded in a pedagogy one at a time and importantly, to create a self-awareness in an organic, ongoing process rather than attempting a goal for admiration. Undergraduate actors, who aim to employ two or more pedagogical methods without observing the compatibility of two or more vocal pedagogies, achieve less of an embodied acting. In other words, these pedagogies are likely to create conflict of ideas that are at the end, confusing to her as there may be no alignment of both pedagogies.

Zarrilli's view on Stanislavsky is clarified by Hurt as follows:

> He does not dismiss Stanislavsky's work and contribution to actor training (which he explains was psychophysical in nature), but stresses that today's "post-dramatic" scripts call for actor training that prepares for more than psychological

> investigations of character (2009:8). He proposes that development of the body and mind through embodied actor training "will allow [today's actors] to solve acting problems of both conventional 'dramatic' as well as 'post-dramatic' dramaturgies such as Sarah Kane and Martin Crump (2014:14).

Now, a prospective undergraduate actor must endeavour to be trained and made to research into eras and styles of speaking for accents realisation in order to train others. She may meticulously correct the actor yet there are challenges in focusing on the undergraduate actor's commitment and attention to her most conspicuous faults, but the actor is not compelled to outgrow these habits within a short duration of training. However, it is paramount for the undergraduate actor to let go during rehearsals and performance; as the aim is to develop a well-rounded actor for accuracy in vocal qualities, specificity and intelligibility which leads to a carryover to other performances and real life situations in order not to fall back to old habitual patterns.

To minimise issues arising from underutilised voice, body and mind for character development and portrayal, the undergraduate actor in the university is encouraged to participate in productions but, in the absence of a vocal instructor or a standard vocal training model, the undergraduate actor suffers on account of inaccuracies which have become habitual; as a result, she becomes an unfortunate reflection of a rigidity process, while other undergraduate actors may have peculiarities and shortfalls. The point is that a single composite mark for the undergraduate actors' performance in any given text is to undergo vocal and body explorations so as to completely lend itself to the correction of individual destruct patterns.

Since Lessac Kinesensic is a proposed underpinning pedagogy to enhance her performance, she does not force but organically develops a vocal and body dynamic for character portrayal. Therefore, actor training in the university need not be deficient in building a well-organised and embodied actor that is supposed to encapsulate the use of voice and speech, body and mind for effective vocal artistry.

2.10 Principles of Lessac Kinesensic Training

Every actor training pedagogy has its own principles that demand its application by the actor to improve her acting performance at different degrees in which the method focuses on. This may relate to voice, speech, body and mind. Many a times, the pedagogues usual encourage actors to use all the principles, but actor trainers usually discourage that (Voice and Speech Review) – for them, not all principles meet the need/demand of the actor who is a scavenger of human behaviours. For this study, we will document by listing the eighteen (18) principles of Lessac Kinesensic training as articulated by Arthur Lessac in his book ***Body Wisdom – The Use and Training of the Human Body***. The study would then go further by selecting the ones applied for the project. The approach to the use and training of the human body involves a good many principles, and theoretical concepts of current scientific thought. The integrative concepts are indigenous to the pedagogy which is as follows:

The 'Human Likeness' Principle, The Human 'Musical Instrument' Principle, The Principle of 'Inner Harmonic Sensing', The 'Perceptive Awareness' Principle, The 'Habitual Awareness' Principle, The 'De-Patterning' Principle, The 'Carefreeness' Principle, The 'Balanced Muscle-Tonicity' Principle, The 'Vocal Sound Stream' Principle, The 'Curvo-Linear' Principle, The 'Generalisation' Principle, The 'Unique Event' Principle, The 'Feedback' Principle, The 'Distribution' Principle, The 'Diminishing Fatigue' Principle, The 'Time-Lag Catch-Up' Principle, The 'Wave' Principle, and The 'Kinematic' Principle.

2.10.1 Basic Principles Applied to the Study

Every actor training has its own principles that demand their application to improve her acting performance. In the new millennium, the needs of the actor are ever changing and never fixed. Often times, we find pedagogies that have benefits for training the actor but with shortcomings. The gist of the matter is for the actor to continue to explore with different pedagogies within her reach to meet her performance needs.

Therefore, the adopted principles of Lessac Kinesensic to training the Nigerian undergraduate actor is not a pointer that it is the most perfect pedagogy, but, as there are

no indigenous African pedagogies yet, Lessac Kinesensic fortunately is the one being experimented with in Africa by Western voice and speech teachers to help improve the undergraduate actor and other performers in Africa.

One reason for adopting the selected principles are based on the fact that all humans have the same organs of speech but are shaped by factors like: standard dialects, accents, geographical location and or paradigm shifts. However, Lessac Kinesensic Training accommodates and embraces the power and musicality in the individuals' voice and speech without imitations. Undergraduate actors are encouraged to be initially conscious, invite themselves to become aware of the inner harmony resonating in their body, and possibly devoid of outer environment as instructors – a self-to-self teaching method. Another reason is that, as they become aware, they perceive what progresses in their voice, speech, body and mind while allowing their five senses lead them. Lessac Kinesensic further allows for the breaking away from habitual pattern which the individual becomes familiar with and invest it in a positive way. And finally, there is the feedback principle that allows for the individual to relate with all that s/he has been trained in and a way forward for carryover in everyday situation. All these flourish to encourage new discourses, and explore with critical engagement with any actor and, clearly put, the African actor. Lessac Kinesensic, when applied to different geographical locations, creates the universal landscape for voice, speech, body and mind training.

2.10.2 The Human Musical Instrument Principle

The human system is according to LKT produces great musicality. It is a string instrument, a reed, brass, percussion and sound effect instrument all rolled into one. An individual especially an actor plays on through consonant sounds and the body plays itself. As this principle implies, the human system, through the actor's use, makes sounds and as this is explored, the actor finds musicality in the production of these consonant sounds especially and how they travel through the voice, speech, body and mind. Actors are always encouraged to patiently listen to how these sounds are realised individually and how they connect with other sounds in words and sentences. The reason for this principle

is the habitual pattern observed among Nigerian undergraduate actors in relation to their first language (L1).

2.10.3 The Principle of Inner Harmonic Sensing

Inner Harmonic Sensing as a principle is a model that encourages the feeling processin an organic way that lead to awareness and the appreciation of sensations. This term coined by Lessac is kinaesthetic understanding, this physical awareness, this body esthetic appreciation, is “Kinesensic.” The actor through this process and a psychic composition senses what is happening within herself and her inner environment rather than the outer environment which may be noisy. This principle invites the undergraduate actor to understand and become more aware of her body, mind and how they align with her voice and speech.

2.10.4 The Perceptive Awareness Principle

The third principle adopted for this study is also an awareness process focusing on the five senses and how the actor perceives and relates from the inner environment (the human system) to the outer environment (other actors, the audience and shared space) this occurs through a synesthetic "harmonic-overtone" sensory system that feels the seeing, hearing, touching, and tasting internally and differently, but always with harmony, concord, and order. As soon as perceptual awareness, from the outside, registers in and upon the individual inner environment, it transforms the feelings, perceptions, consciousness and reactions directly into internal harmonic senses.

2.10.5 The De-Patterning Principle

It is possible to establish a foundation of reawakened awareness by which our habit-formed patterns can be de-patterned. That is to say, the awareness will catch those habits in the act; challenge them, redefine them, re-familiarise us with them, make them fluid, and return them to our creative resource(s). Flexibility thus induced, the "habit" is neutralised, negated, and we are then able to respond to internal cues and signals that guard against unbalanced, unnecessary erosion. A habit ceases to be a habit that instant one is aware of it – in use.

2.10.6 The Feedback Principle

This principle is often used as a self-teaching strategy, to communicate to ourselves how we should feel when we are doing something healthy for the body and therefore, helpful and desirable. The human body knows when she is getting pleasure and when there is pain. The feedback principle gives a trainer of Lessac an opportunity to assess what the trainer may be gaining through the trainee's perception and what the trainer observes in performance space and everyday communication of the trainee.

In summation, the adoption of the selected principles will be discussed in detail through the findings from the study. It will also give details on the effectiveness of LKT to the Nigerian undergraduate actor.

2.11 Vocal Neurological Regenerative Growth (NRG)

The Lessac Kinesensic Training (LKT)express that the vocal pedagogy focuses strongly on the concept that sensory discoveries and kinaesthetical feedback (physical feeling) are being promoted in order to encourage a way of steady consciousness and active relaxation (Lessac 1997; and Raphael 1997). Lessac further describes his work based on the human body wisdom. This body wisdom deeply exploresthe human systemand enables the individual to redefine one's knowledge of the body, which in turn cultivates a simplified and sometimes complex idea of one's self-image. Lessac hypothesise that body wisdom encompasses vocal functioning. Lessac employs three vocal actions known as Neurological Regenerative Growth an acronym coined by Lessac as"NRG". This is a natural physical state which grows from an organic voice, speech, body and mind training. These include the Kinaesthetic: Structural energy, Tonal Resonance energy, and Consonant Instrumental energy.

2.11.1 Structural Energy (NRG)

Structural NRG employs the use of the oral cavity i.e. the tongue, lips, bone structures and vibrations to resonate sounds that are responsible to articulation. This is to create a free voice that meets the demand of any given audience. The main energy sounds produced in the structural energy are vowel sounds which Lessac has given numbers/symbols like Daniel Jones' cardinal vowels. They are found in words like: #1 – m*o*ve, m*oo*n, n*ew* #21 – st*o*ne, m*oa*n, and *o*ld #3 – *a*ll, mo*u*rn, and f*aw*n #3y – b*oy*s, av*oi*d and *oi*ntment #3r – *ear*n, b*ur*n, and b*ir*d #4 *o*dd, w*a*tch, and s*o*rrow #5 l*ar*ge, h*ar*d, and f*a*ther #51 dev*ou*r, h*ou*r, and c*ow* #6 h*a*nd, n*a*sty and m*a*n #6y k*i*nd, sk*y* and t*ie*d and #Y1 d*u*ty, st*u*pid st*ew*ard.Studies (Munro, Leino and Wissing, 1996; Barton and Dal Vera, 2011; and Barrichelo-Lindstrom and Behlau, 2009) have found LKT to be a perfect way for helping actors to produce a beautiful tone and a useful tool for acoustic discoveries.

2.11.2 Tonal Energy (NRG)

Tonal NRG creates and promotes a beautiful sensation and vibrations through bone conductors that travels through the theatre head. This can be likened to the sensation when a tuning fork is placed on the incisors (Lessac 1996) this is a brilliant an effortless production when done by putting the entire right ingredient into a pot of stew. Unlike many training that employ "mee, mee, mee" i.e. a nasal sound and vowel sound; Lessac

training employs what linguistsdescribe as a semi-vowel sound “y” the LKT encourages a resounding production of vowel realisation with musicality. For crisp production of tonal NRG, there should be no pressure, squeezing, breathiness, nasality or tightness with the back of the tongue during exploration in order to arrive at a vibrant and colourful vowel sound. Vibration is a key target to this energy as the tonal energy is realised in the following words: *tincture, please, breeze, easy,* and*immediately* the vowel sound in the listed words is called the y-buzz (Lessac, 1996) and +y-buzz in words like: *stage, pain, dedicate,*and *occupation*. Actors trained in LKT never stop the explorations as they move from self to any given text for performance.

2.11.3 Consonant Energy NRG

Consonant NRG is a music making melody employed in LKT. Lessac observes that the human system is an orchestra on its own and thereby sounds (especially consonants) of everylanguage have musicality in them. The consonant sounds can either be sustained or tapped (voiced or unvoiced) to produce very strong vibrationsthat identifies with various musical instrument in a nutshell, there is inclusivity of identity in LKT.

With an observatory conclusion, Lessac Kinesensic Training (LKT) engages with the human anatomy and physiology functionof the voice, speech, body and mind for optimal awareness in performance. It further extends to reduce vocal injury, body tightness and or a depressed state of mind. Every culture is identified and embraced in training of individuals and most especially actors no discrimination in the training of any gender.

2.12 Body Neurological Regenerative Growth (NRG)

Lessac Kinesensic Training identifies and taps into natural energy or behaviours that different physiognomy exhibit. There are ways in which the human system works that Lessac identifies as “body esthetics, inner harmonic sensing, organic instruction, and the familiar event” they in all improve the vocal wellness of the human system if utilised positively. To this end, the ways in which the human system works produce the four body energies (NRGS) identified by LKT which is basically from inner self to out self or vice versa and they include; *(i) Potency (ii) Radiancy (iii) Buoyancy and (iv) Inter-involvement.* Energy here, according to Lessac, can be described as the invisible current that connects

the actor to the audience. It is internal, intangible and not related to muscular energy. It is the reason behind all movements and actions (1969:121). Often times when the training is not embodied by the actor, the energy (NRG) qualities are rarely used to the exclusion of others. They cannot be used in isolation either during real or performance situations. They are inter-woven in nature.

2.12.1 Buoyancy Energy (NRG)

Buoyancy NRG is the type of energy state that deals with fluidity, ease, grace and flexibility. In this energy state, we feel as if we are weightless and then floating. Buoyancy is that state, it is synonymous with lightness of weight, as if the body was fullof oxygen and was lighter than air. It feels like an active relaxation different from the type of relaxation in which we feel the body as heavy and sluggish (Oliveira, 2009). A sensation that makes a person feel as light as a feather and at the same time graceful in speech.

2.12.2 Radiancy Energy (NRG)

Radiancy is another energy state characterised by alertness, excitement, spontaneity and anticipation. This is an energy state commonly found in children. It usually starts as a vibration in one part of the body which then spreads gradually to the other parts in a subtle or sophisticated way. It is electrifying. Radiancy NRG awakens the muscles and 'gives life to muscular activity' thereby 'eliminating the feeling of indolence and lack of motivation' (Oliveira, 2009). We go through many things in life that triggers this energy state and many times, propels electrifying laughter. This body energy state is experienced or employed by stand-up comedians and their audience. It triggers happiness, relaxer-energizers (Kinghorn, 2009) and improves better breathing.

2.12.3 Potency Energy (NRG)

Potency is the 'energy that produces the sensation of muscular power' (Oliveira, 2009). This energy state gives new life and awakens the body from a state of inactivity. It gives us strength and power (Kinghorn, 2009). Lessac (1997) describes it as a familiar event for this is associated with the extension of the arms and legs with a yawn that revitalizes the body, extending and relaxing the muscles.Certain cultures (especially Nigerians) have this

energy state as a natural phenomenon. This can be associated with the state of the mind and how one reacts to things in a forceful, authoritative and energetic manner.

2.12.4 Inter-Involvement Energy (NRG)

Inter-involvement is defined as 'the mutual exchange of energy between living entities' (Lessac and Kinghorn, 2014: 100). This energy state combines the other energies discussed above in a bid to communicate with the external environment 'without being conscious of the use he makes of his energy states': Inter-involvement could be compared to involvement of an actor with the given circumstances that define the situation of his character and influence or justify his behaviour, or with the way the actor shares his playing with his colleagues and the audience (Oliveira, 2009). This energy state imply that the inner and outer environment of the actor with herself and other actors are in sync to produce a unique energy state can that often combines all the aforementioned body energies.

2.13 Empirical Review on the Effectiveness of Vocal Pedagogies for Actor Training

This aspect of the study is intended to examine what existing literature or studies have been conducted in relation to voice and speech training and documentation in terms of acoustic and perceptual analyses to the development of training the speaking actors, the relevance, how it has challenged and improved the current study. The first level question is whether there is a stringent vocal pedagogy or pedagogies for improving actors' vocal artistry, or if there are specified principles that guide improved vocal performance as compared with what the current study has discovered. The second level question that guides the study was to identify how years of actor training on voice and speech; anchored by psychophysical trainings aided in the creation of an embodied actor as well as the role and performance of breathing,emotions, and posture. This concludes the impact of Lessac Kinesensic and other psychophysical approaches on actors' performance. The third level of question is to evaluate the documentation of acoustic and perceptual were used to assess how actors comply with trainings and the likelihood of benefit(s) from training. Feedback would be used to assess which factors could influence cooperation if conformity assessment factors may be relevant in the current study.

2.13.1 Voice and Speech Training in the Development of Actor Training

In order to understand the male physiological and physiognomy as well as the socio-cultural concept of maleness as it applies to voice, Steyn (2014) examines the unique precepts of the male undergraduate actor. Voice is a topic that continues to affect and shape social identity in a cultural context (Karpf, 2006). The view is that the socio-cultural paradigm of the actor limits or creates boundaries to the masculine vocal performance and expression. The research is based on previous research which are substantial and with unique and structural differences documented on the male voice that are masculine.

The gap in this study asks a question: what are the attributes, factors and pedagogy put into consideration when feeding (training/equipping) the voice of the male undergraduate actor by voice teachers? In order to answer the issue raised, the impact of various socio-cultural influences on the voice with specific reference to the male voice was analysed. In this light, the male voice is regarded to be possibly subjective and processing factors that may impact vocal investigations. The research argues that it is important for voice coaches as well as teachers to identify and accommodate the gender of the masculine undergraduate actor in a learning process and also, encourage himto explore a dynamic voice that is expressive and optimally functional.

Rubino and Stewart (2018) carried out a study on the voice training methods in MFA acting programmes and the incidence of problems or challenges they encountered. To achieve a substantial result, tutors/professors of 41 universities with an MFA degree in acting as specialisation received an electronic questionnaire. About twenty-eight responses were got from studentswho had be diagnosed with voice problems due to excess demand of voice use for the speaking voice. The study concluded that students disclosed excessive demand on their vocal apparatus, while others recorded medical conditions. The study further recorded a list of speaking voice training pedagogies like; Fitzmaurice Voicework, Linklater Voice, Patsy Rodenburg, Suzuki Method, Lessac Kinesensic, Cicely Berry, Alexander Technique, Knight-Thompson, Estill, and Dudley Knight as employed by the students whether as primary or secondary approach. Of the aforementioned pedagogies, commonly used were Linklater Voice and Fitzmaurice Voicework. What can be concluded here is that, many undergraduate actors are loyalists to specific pedagogy and often times find new pedagogy strange to their vocal health.

Research over the decades and centuries has shown that vocal communication is a way of preserving the human societies. Vocal interaction became a way to control human societies. (Kimbrough, 2011). Cazden (2017) conducted a study on voice and expression in the context of social sounds among animal performance gestures. In this study, a latest and powerful theory is that psychophysiology links thedevelopment to particular modifications in the vagus nerve, which is also associated with the nerves that regulate the larynx. The emotional, physical discovery is attributed to polyvagal theory. The polyvagal theory applied in the study makes a huge impact of communication ability and the consequences forvocal training for the speaking voice in the theatre.

Edwards and Jacobsen (1987) attempted in a Canadian context to ascertain the similarities and distinctions in standard and regional speech. Standard dialect, which is seen as a manner of speaking by a selective or general society, used in all facets of communication like school, social media, stage performance and writings. The survey carried out discovered that a variation which could be said to be regional standard was best appreciated in terms of expertise, achievement and status and in terms of integrity and attractiveness, when compared to other types The dimensions are areas that actors may consider in character interpretation in an attempt to integrate them to performance. The results of the study support the idea that in contexts possessing regional standards, these varieties may have a greater all-round favourability than standard varieties typically possess in settings in which more clear-cut distinctions can be made between a single standard and other, nonstandard forms. The summation here is that, more investigations are needed to be carried out in accents for actor training pedagogies.

Nicholson (2017) conducted a study to understand the problems surrounding teaching vowels physically. The study examined the difficulty in vowel description as opposed to consonants and the traditions by early phoneticians. They further came up with a presumption of a blanket acceptance of this method of teaching by speech teachers which have been debunked by other schools of thought. The study concludes that there is no definite vowel placement or position in the oral cavity. What this does imply is that, there is the need awareness training than otherwise and how trainees perceive sounds is cogent i.e. the auditory qualities. A close remark is that, as far as students and actors see vowel

training and their descriptions quite daunting, they are likely to follow the instruction of the voice coach since the sounds can be misleading during accent realisations.

Gaskill and Hetzel (2017) observed in their study that maintaining vocal health can be distressing to actor and student of acting due to the vocal high demand placed on their voices from speech manipulations, heightened speech, animated character voices and so many more. Vocal fatigue, related to the amount, type, and duration of voice used over a period of time, can lead to acute or chronic vocal injury. However, actor training is not devoid of vocal management and many times actors do not take this into consideration until they suffer from a medical condition. In their study, they discussed the use of a measurement technique called 'vocal dosimetry', which can quantify the real time the vocal fold tissue stresses related to the frequency, intensity, and accumulated duration of vocal fold vibrations. The study examined three types of actor – undergraduate, professional graduate and professor of acting – to find ways to effectively manage vocal loads and optimise vocal health. The study proffered ways to monitor, prevent, and recover from vocal fatigue by stressing the need for the actor to have the mind-set of an athlete, being intentional about vocal training, exercise, self-care, prevention and recovery. The study concluded that actors without access to a vocal dosimeter can benefit by creating and adhering to a plan for managing vocal demands at any stage of their careers.

2.13.2 Lessac Kinesensic and the Development of Actor Training

Myers and Finnegan (2015) carried out a study using Lessac Kinesensic Training (LKT) to ascertain the levels of intelligibility and loudness of speech of undergraduate actors during a stage reading. The participants comprised of 8 unprofessional (5female and 3 male) and their age was between 22 to 54 years. They were subjected to read dramatic text, isolated consonant clustered words, and phrases selected by the study. For perceptual findings, twenty (20) judges who were graduate students were involved and this comprised of (17female and 3 male) whose age ranged from 22 to 37 years. For the acoustic discoveries, Computerized Speech Lab (CSL) was employed and One-way repeated measures ANOVA. All the parameters for assessment i.e. perceptual and acoustic findings showed a statistically significant effect on some participants and not all

articulatory conditions while there were significant differences between articulatory conditions too.The study concluded that there were great benefits to the use of LKTemployed in the study as a production therapy.

Verdolini-Marston et al. (1995) evaluated with auditory assessments the impacts of Lessac-Madsen Resonant Voice Therapy (LMRVT) and Confidential Voice Therapy on females with laryngeal nodules. In the LMRVT group (N=3), and also the Confidential Voice Therapy group (N=5) but not in the control group of vocal hygieneprovide (N=5), significant improvements were identified ($p< 0.05$).The trial discovered that better adherence, regardless of the type of diagnosis, led to better results.Arguably, the sample size was insignificant, and the attrition rate was strong as well, with three of six resonant voice therapy participants who had left the studies. Nevertheless, the lower sample size has still shown a positive result, which demands improved data as also observed in the current study.

The uncontrolled longitudinal analysis of Lessac's y-buzz, by means of perceptive and acoustic effect measures was undertaken as study by Barrichelo and Behlau (2007).The respondents of the study were nine newly trained graduated actors. There was utilisation of auditory-perceptual and acoustic evaluations to compare y-buzz productions as opposed to the usual tone.In contrast to /i/ productions of normal voice, y-buzz productions have been considered to resonate 74% more often. Acoustic anxieties ($p=0.002$) and flicker ($p=0.038$) were also reduced significantly following y-buzz. However, the study was restricted to limited sample size (N=9). In addition, until the resonance effect was satisfied, subjects could repeat y-buzz, while observations might have had a preference in this factor.

The assessment of Arthur Lessac's y-buzz to determine the impact as a model/approach of the voice of an actor was carried out by Munro, et al. (1996).One of the key aspect of Lessac Kinesensic Training is the y-buzz. The study employed LTAS y-buzz with prose extracts in order for professional and untrained masculine voice. The spectra analyses for the two male voices trained are clear indication of effective teaching tools and this call for more in-depth study in this field. The Lessac's System is seen to be potentially effective

and provides the participants and other actors a resounding vocal apparatus capable to be intelligible without biasesof intonations. The study concludes identifies the African voice to possess a unique and crisp quality, précised formant as applicable to the African voice.

2.13.3 Breath in Speech Performance

Sonnenberg (2005) explored a therapeutic procedure for the treatment of speech issues among educators. The study consisted of five female educators with speech issues reported attended six speech therapeutic sessions in order to enhance body position and diaphragmatic breathing, create advance vibration patterns, decrease laryngeal stress through speech and singing and enhance vocal hygiene. The information was collected using perceptual assessment, objective measurements of voice and two patient-based results of therapy: VoiceHand Index (VHI). The findings showed that the reported speech issues could be established and maintained by educators with the described therapy, a better use of voice and better vocal hygiene habits.

Roy, Weinrich, Gray, Tanner, et al. (2003) investigated the reliability of threeinterventions for educators with voice disorders in a randomised controlled clinical trial. Educators who had voiceissuesfrequently in past were exposed to six weeks of outcome measures of voice and muscle respiratory training. Participants that received ChatterVox mobile amplifier or resonance therapy showed that their voice disability level and speech impairment/infection gravity had been significantly reduced. The research showed the advantages of acoustic amplification as part of therapy programs for speech educators.

The literature on resonant vocal therapy was systematically reviewed by Yiu, Lo and Barret (2016) and the levels of data evaluating the validity of resonant voice therapy for treating dysphonia assessed. From 1974 to 2014, archived journal documents were searched for and evaluated through the existing database schemes by two autonomous reviewers using the keywords half-occluded, humming, closed tube phonation and resonating.Grade of Recommendations Assessment, Development and Evaluation (GRADE) as an evidence quality was used to assess the grading of recommendations. For the results, 13 articles fulfilled the requirements for search while 2 reviewers chose nine documents. The remaining 7 papers were observed and 2 have been randomised-

controlled. Only four had definite resonant voice therapy. After all variables carried out, there is evident on the practicality of a resonant voice and speech which provides additional proof in training for a distinct population, larger scale and a broader spectrum of populations.

Danford and Mercein (2018), who are trained actors, carried out an interesting qualitative pilot study to explore the relationship among voice and childbirth techniques. They relied heavily on their vocal abilities during their performance training. Specific questions were targeted: had other mothers with comparable backgrounds used vocal approaches in the context of childbirth? What distinctive vocal exploration is relevant to a woman in labour? And how can a midwife/doula (as birth experts) gain insight into the connection between birth, breath and speech? It was proposed that mothers who were actors benefitted immensely by their exposures to vocal job during pregnancy after interviewing mothers who were actors, birth specialists and teachers as a qualitative measure. The research revealed, along with a healthy and uninhibited vocalisation, an important understanding of physical consciousness and breath.

Chen, Ma and Yiu (2014) explored the impacts of resonant vocal training on face bone vibration using twelve individuals who were non-dysphonic and four resonant voice therapy sessions were held within one week. The respondents were asked to generate vowels /a/, /i/, /u/ and nasal /m/ at pretest and posttest of training in resonance. Compared with piezoelectric accelerometers the vibratory levels in the face (nasal bridge and upper lip) and around the perilaryngeal region. Furthermore, two-way repeated variance analysis (ANOVA) showed an important primary impact of exercise on facial bone vibration ($p< 0.0001$), but not in the region of concentration (Chen et al., 2014). Theexcessive vibration in the face area was not caused by improved energy produced by the larynx but by the resonant voice therapy workout in the face bone vibration. The enhanced vibration of the bone represents the resonant voice and could thus be regarded as an indicator for resonant speech feedback. Because only four therapy sessions were performed in a group of non-dysphonic subjects with a positive potential impact on their voices and the impacts of the therapy were observed with the level of evidence merits an upgrade.

Chen et al. (2007) examined the health impacts of Lessac-Madsen Resonant Voice Therapy (LMRVT) with perceptive, acoustic, physiologic, and aerodynamic workable metrics for 24 female educators with voice issues. For a weekly treatment of eight weeks, participants had one 90-minute session. The data findings at pretest and posttest treatment were compared using paired t-tests. It was discovered that acoustical basic and maximum intensity of speech through laryngo-stroboscopic findings all improved significantly ($p < 0.05$).The level of scientific proof was adversely impacted by a number of confounding variables. This empirical study was anon-controlled observational study which also has a small sample size (N=24).

Elchuk (2018) investigated many actor training approaches and those that prioritise breath freedom,along with the movement of the lower abdomen while breathing, to ensure efficient vocal support, as well as emotional and creative access. The neurobiological foundation for this experience is in some ways investigated, with special emphasis Antonio Damasio's work (1996) and modern study of the enteric nervous system or "gut brain". This was also discussed in the study. And its application to the methodology for actor training in relationship to David Smuckler's "swap exploration" which is not the only approach that prioritise breath but to state that breath is one of the key elements in the work of the actor. The study observed that Smuckler's approach to contextualising a self-perception of the actor's tool as the visceral source of thoughts, imaginings or emotions and actions is comprehensively debated in using the image, ideokinesis, and metaphor in vocal training. What this suffices to articulate is the ingrained tool Smuckler equips the actor with to carry on and what LKT invites the actor to explore when reading, speaking and performing.

2.13.4 Experimenting and Incorporating Pedagogical Tools to the Development of Actor Training

Eng Hui Lim (2016) carried out a study of the multicultural situation in Singapore's actor training in order to examine the fusion of indigenous and foreign acting. The argument and findings here is that many theatre companies and schools often modify or in its entirety incorporate foreign pedagogies. The case study is Nine Years Theatre that was

recently formed, modified the actor training methodologies of Anne Bogart and Suzuki Tadashi for bilingual inclusion. The investigation examined the training methods, their focus and how receptive Singapore-based actors were to them.The significant data proved that indigenous trainings embraced foreign principles and pedagogies as the actors embodied more of the foreign than the indigenous pedagogy.However, intercultural manner of training seems a way for inclusivity and that biases was highly discouraged. It also encourages the developing of indigenous pedagogy for cultural identity.

Coronel (2018) conducted a research on coaching Asian actors and accent to unearth culturally sensitive strategies. The study observed that historically, Asian characters have been depicted inaccurately in theatre as early as the eighteenth century. The Asian accent has been a major defining feature of Asian people, particularly in media and stage portrayals of Asian characters. Owing to the fact that many characters on stage and film have been misrepresented through stereotype and exaggeration, Asian actors have had to adhere to these ideologies in their professional careers. Furthermore, the study employs the grounded theory methodology and seeks approaches that might mediate the overarching challenges that are faced by the majority of Asian actors. Through the grounded theory methodology, the study discovers approaches that might suit their needs and elevate the voice field by focusing on a marginalised demographic.

2.13.5 Psychophysical Training and the Development of an Embodied Actor

Oram (2018) carried out a study on how beneficial psychophysical training approaches was on neurodiverse undergraduate actorsmainly about mental learning view that argues for specific neurological conditions as a result of normal human gene variations. These differences can include those labelled with dyslexia, Autistic, Dyspraxia, Attention Deficit Hyperactivity Disorder (ADHD), and many others.Social Theory of Learning Difference was adopted for the study and highlighted how discriminative the training approaches had on undergraduate actors who were dyspraxic or dyslexic. The value and advantages of psychophysical training is immense but that teachers/coaches/institutions that employ them need to depart from Psycho-Medical Theory of Learning Difference and progress to a framework that provides tools for learners with different medical needs/attention. The conclusion of the study is that users of psychophysical approaches should revise or modify

them for various learners for improve effective communication as well as an embodied actor.

Kapsali (2013) reports the context in which actor training practices are situated. He uses Yoga, Tai chi and Feldenkrais to track how the trainees'process is based on the philosophies that underlie their actions.This study further supplement the accounts which have analysed these disciplines with respect to the individual development of students or participants and to suggest that the success of such structures must be seen and discussed according to the social, cultural and economic conditions under which they function and to the stakeholder training programmes. A cross section of actor training pedagogies, the study ends with the author's experimentation of Yoga, Tai chi and Feldenkrais.

Oram (2018), in another study, stresses the need for a radical change in the standard for actor and voice training through a psychophysical training approach. There is a trend by some societies to dysconsciously discriminate the dyslexic and or dyspraxic learners as he points out in a recent study. The study builds on Jacques Rancie⇑re proposed theory in his review of Joseph Jacotot's emancipator pedagogy, *The Ignorant Schoolmaster*, to provide an alternative perspective on actor preparation, beginning from the premise that equality is the distant goal. The summary of the study is that actor trainers should adopt a stance of indifference in relation to their self-knowledge by relying on the student's ability to understand what is needed.

2.13.6 Acoustics and Perceptual Approaches to Improved Vocal Performance in Actor Training

Molholt (1990) in a study on dynamics for improving patterns in pronunciation through scientific approach realised that while there are excellent reasons to enhancing effective speech communication and articulation training, voice and speech practitioners are often being misconstrued by their clients. The reason: the inflexible tradition of a classroom teaching yields little or no effect for place and manner of articulation. But by shifting the focus of instruction to the direct feedback of real-time acoustic analysis in the visual mode, instructors are free from the complex and often unproductive terminology of articulatory phonetics, and students are free from the burden of translating instructors'

general comments into plans for specific changes. Flege and Hillenbrand objectively assessed improved pronunciation in three distinctive ways: “through the use of rating scale judgment by native speakers of target language, by calculating the frequency with which L2 [target language] phones [sounds] are correctly identified and through acoustic analysis” (1987:199).

A study was carried out by Walzak et al. (2008) based on a longitudinal study over 12 months to assess acoustic modifications in the voices of undergraduate actors. Eighteen registered 3-year acting students in an Australian university comprising of 9 females and nine males were evaluated at pretest and posttest of 12 months. The instruments used were: questionnaire, reading, interview, extemporaneous speeches, reading, pitch range tasks and sustained phonation tasks.The samples were later analysed to measure their jitters and shimmers, singing pitch range, speaking and singing, fundamental and frequencies across tasks. Posttest results showed that shimmer increased significantly for all participants, while the female participants’ pitch range increased significantly after training with a lower mean frequency.Nevertheless, there was still room to employ other pedagogical tools to ascertain the productivity of their emotional state, physiological and vocal changes to further study to determine the effects of actor training experience.

In their study, D’haeseleer et al. (2017) examined the risk factor, voice disorders, vocal quality and complaints by theatre actors and their and risk factors for developing voice disorders in theatre actors and the implications on speech and voice by comparing goal and subjective vocal quality before and after performances. This was carried out before and after a performance with duration of one and half hour in their stages: questionnaire, perceptual and acoustic. Samples of 26 theatre performers 11 females and 15 males with an average age of 41.9 were actors (15 men, 11 women, mean of 41.9 years) were observed and analysed with the aid of the *Praat* software programme. Speech samples were the mixture of ongoing and continuous phonation. Perceptual was codified and analysed, acoustic results showed some participants with mild dysphonia, while 50% of the participants reported to have vocal complaints after a performance. The questionnaire showed gross abuse of the vocal apparatus which may be as a result of lifestyle habits and there was no significant improvement on the vocal quality.

An acoustical and perceptual investigation was carried out by Barrichelo-Lindstrom and Behlau (2009) on the productions of Lessac's y-buzz and sustained sounds of Brazilian Portuguese /i/ vowels as often pre and posttraining was employed to investigate the existence and connection of the formantresonance with the perception of a more resonant voice. The participants comprised of 54 acting students 23 male and 31 female without speech issues and distributed into seven groups for the study. Four training sessions were given each week to each group. For pre-training recording, three occasions at self-select comfortable frequencies and intensity, they were requires to sustain the vowel /i/ in a normal/habitual mode.This exercise they repeated at post training for acoustic discoveries.Five voice experts rated the resonance of each sample using *Praat* software programme measuring the formant frequencies, distance between the formants, and the harmonic frequencies. Y-buzz was recorded to be more resonant that the Brazilian Portuguese /i/ after the training regardless of gender that could have been a contributing factor, while perceptual finding that not have much impact on the study.

Ogawa et al. (2013) documented a noteworthy on the effects of humming on 23 subjects with muscle tension dysphonia (MTD). The evaluations with the aid of laryngoscopic and assisted by false vocal fold (FVF) and antero-posterior (AP) in comparison togetherwith natural, humming and um-hum phonation (Ogawa et al, 2013). Humming phonation documented lower results on FVF and AP before the humming intervention. The findings of the study carried out by Ogawa et al. (2014) on 48 subjects 20 non-dysphonic and 28 dysphonic aided by electroglottographic (EGG) measures. Closed Quotient (CQ), perturbation, and vocal fold contact duration extracted from the electroglottographic (EGG) comparison was done at three levels: across natural, humming and um-hum phonation. Out of the 28 patients, data were selected from 7 of them with dysphonia due to the inability to produce a significant reduction in roughness the treatment of humming. Considering the two-way repeated ANOVA, it is evident that variability of closed quotient and perturbation decrease in the treatment in both dysphonic and non-dysphonic groups ($p< 0.05$). However, the neglect in the assessment of anomalies could have caused a bias in attrition and possible exaggerated output.

In a cohort study, Verdolini et al. (1998) investigated the laryngeal adduction in resonant voice aided by videostroboscopy. To achieve this, 12 professional actors and singers were selectedas subjects due to their vocal training. Of the 12, six had healthy normal voice and the other 6 had vocal nodules. They were given instruction using video-laryngo-stobscopy to generate pressed, resonant, breathy and normal voices. On the degree of laryngeal adductions blinded visual-perceptual ratings were attained on an ordinal scale. The two groups (dysphonic and non-dysphonic) produced resonant voice with a laryngeal configuration that was barely adduced or abducted and was significantly distinctive from pressed and respiratory voices. The researchers admit that laryngeal configurations could have become confused by the presence of the endoscopy. In relation, all voice-trained singers and actors were the subjects recruited. This makes it hard for a whole population to generalise the results.

During resonant vocal production using the computer simulation model, Titze (2006) reshaped the vocal fold vibration. The model showed the effects of semi-occluded vocal tract and epilarynx reduction during resonant voice. The produced volume, the force of vocal fold, and the vocal economy were investigated using the simulation model for resonant voice production.When the epilarynx tube was reduced and the opening of the mouth widened, the maximum flow declination rate was determined, which is associated with the voice output spectrum. It was argued that semi-occlusion of the vocal tract in a correctly produced sounding voice enhances the interaction of the source (vocal fold vibration) with the filter, which produces a high voice intensity, productivity and reliability. Results also showed that the lowest maximum glottal area declination, which is associated with low impact between the vocal folds, occurred when the epilarynx tube was widened while the opening in mouth was narrow. The semi-occlusion in the mouth increased the pressure at the back resulting to the amplitude of the vocal fold vibrating reducing, the collision rate and subsequently the impact force between the vocal folds. The high pressure in the vocal tract is created without excessive tissue damage.

Leino (2009) studied the voices of ordinary/untrained university students in trained speakers, singers and dysphonic patients. Past studies carried out on professional voice a user, on account of long-term average spectrum (LTAS) was supposed to distinguish

between good, poor and intermediate voices. This research however, carried out an assessment of text reading samples for a period of one minute, using a perceptual assessment and LTAS. According to the research results, in the frequency range 1-3 kHz, and a significance peak at 3–4 kHz, the excellent and normal voices differs from the low ones in their relative greater sound rate. But, as for the characteristics of LTAS, excellent voices did not differ from normal voices. Though weakly were the scores of the voice quality as they rated 3-4 kHz.The basis of the study and its findings from untrained to trained voices. It nevertheless gives room for further studies.

2.13.7 Appraisal of Literature Reviewed

The reviewed literature has indicated that voice and speech training is an indispensable part of training the undergraduate actor. The studies investigated proved the relevance of acoustics and perceptual analyses and how they have enhanced outcomes of training actor's voice and speech and given room for further investigations on various pedagogical tools to vocal performance and expressions among undergraduate actors and professional actors. However, the years of actor training, early exposure to speech training, influence of L1 on diction and the focus of pedagogies had significant effect as reported. The studies on the influence of gender on vocal training benefits have either had equal gender as participants or more females than males which support consistency in the gender population of studies carried out (singers and actors) as opposed to what the current study experienced.

Due to the dearth of vocal pedagogies designed for the African and Nigerian undergraduate actor, discourses continue whichwill ultimately propel investigations, explorations and researchon existing western pedagogies and their application and documentation on the African undergraduate actorsand largely Nigerian undergraduate actors in a view to develop African/indigenous/home-grown vocal pedagogies for an embodied/expressive actor. First language, years of actor training, and exposure to vocal pedagogies are seen as pointers to improved vocal artistryby actors. Empirical studies on first language interferences in actors' vocal artistry was not considered as many of the reviewed literature had participants who had acquired foreign accents to meet global standard in the acting world.

CHAPTER THREE

METHODOLOGY

3.1 RESEARCH DESIGN

The research design adopted in this study consists of the pretest-posttest control group quasi-experimental research design. This design was adopted because the participants for this study were randomly selected (treatment) and total enumeration (control) assigned to the groups.

The choice of the design was based on the fact that the study involved an independent variable (Lessac Kinesensic Training– treatment and control group) moderating variables (years of actor training experience and firstlanguage). Years of actor training experience has two levels (1-2, 3 and above) and first language at two levels (English and Nigerian languages).

The research design is schematically illustrated as follows:

$T1X_1T3$.....1

T2X˜T4.....control

T1, represents pretest for the experimental group 1 and control group respectively.

T3, represents posttest for the experimental groups 1, and control group respectively.

X_1 represents Lessac Kinesensic training as experimental group.

X˜ represents the control group which will be given instruction but no treatment.

3.2 Population

The population for this study consisted of selected undergraduate actors in training who specialised in Acting and Speech and Rhetorical Arts in University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, Nigeria. Table 3.2 detailed the breakdown of the participants. Of the seventeen participants, twelve of the participants were females, while five were males. Thirteen of the participants were 300Level undergraduate actors and four were 400Level (final year) actors. The number of the participants for a trainer falls in line with Lessac Training and Research Institute (LTRI) for Certification level.

3.3 Sample and Sampling Technique

The sample size for the study consisted of seventeen (17) undergraduate actors from University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, Nigeria. Multi-stage sampling procedures was used for the study. In the first instance, simple random sampling technique was used to pick the two first generation universities in southwestern Nigeria. Secondly, convenience sampling technique was used to select seventeen (17) participants from University of Ibadan, Ibadan (ten) and Obafemi Awolowo University, Ile-Ife, Nigeria (seven). The selected universities were grouped thus; University of Ibadan, Ibadan (experimental group) and Obafemi Awolowo University, Ile-Ife (control group, no treatment).

Sample size determination

The sample size for the study was determined using (Yamane's 1967) sample size formula below:

n represents the required sample size

N represents the estimated student population.

e represents the degree of error tolerance.

$$n = \frac{N}{}$$

$$n = \frac{17}{1+N(e)^2}$$

$$n = \frac{17}{[1+17(0.05)^2]}$$

$$n = \frac{17}{[1+17x\ 0.0025]}$$

$$n = \frac{17}{1.04}$$

$$n = 16.3$$

Due to 10% attrition rate, sample size was increased by 1.63 = 17.93 approximately =18.

Table 3.2: Tabular presentation of the study location by percentage

S/N.	Study Location	Gender	Level	Treatment group	Participants to be sampled.
1	University of Ibadan (Theatre Arts)	Female 9 Male 1	300 Level – 8 400 Level – 2	Lessac Kinesensic Training.	10
2	Obafemi Awolowo University, Ile-Ife (Dramatic Arts)	Female 3 Male 4	300 Level – 5 400 Level – 2	No treatment	7
				Total	17

The number of trainer to trainees is in tandem with Lessac Training and Research Institute (LTRI)'s recommendation.

3.4 Research Instrument

The main instrument that was used, was self-developed and structured to focus on the use of basic principles of Lessac Kinesensic Training on Vocal expression Questionnaire (LKTVPQ) which has three (3) sub-scales: Knowledge of Vocal Training (KVT) (r)= .81, Undergraduate actors Intelligibility Scale (UAIS) (r)= .76, and Undergraduate Actors Vocal Expressive Scale (UAVES) (r)= .86. The instrument was constructed in line with the variables in the study as stated in the hypotheses.

Section A: This was based on demographic attributes of the participants.

Section B: This consisted of questionnaire items on knowledge, application skills and performance of undergraduate actors. Eighty-one (81) question items were generated on a four (4) point likert format. The items were subjected to exploratory factor analysis setting retention criterion at 0.6. After the items were factor loaded, thirty-four (34) question items met the retention criterion at 0.6.

3.4.1 Training Package

The training package that was used was a self-developed manual that was validated by the experts in the department of Theatre Arts, Faculty of Education, and experts in Lessac Training and Research Institute (LTRI), USA, for the treatment group. It was a LKT guide outlinedfor a step-by-step process in organic growth training. The step-by-step approach focused on the following Lessac Kinesensic Training for training actors: '**saying a goodbye to imitation'**, **'breathing and posture'**, '**how vocal sound is created'**,**'how the body works'**, **'what is Kinesensic, what is energy'**, **'consonant orchestra'**, **'vocal and body energies (NRGs)'**, **'vocal dynamics'**. The adopted five principles of Lessac kinesensics are –(**The Human "Musical Instrument", Inner Harmonic Sensing, Perceptive Awareness, De-Patterning and Feedback**). It was validated through the aforementioned persons to remove ambiguities and items construction problems. The inter-rater reliability method was computerised to yield a specific value.

3.5 Validity of the Instrument

To test that the instrument measured what it is purported to measure, the instrument was presented to the researcher's supervisor and other experts in the university, to ensure the face, the content and the construct validity of the instrument.

3.6 Reliability of the Instrument

The validated instrument was pretested among twenty undergraduate actors of University of Lagos, Akoka, who were not part of the main study. The instrument was administered once and subjected to Cronbach alpha to determine the internal consistency of the instrument and the result yielded 0.78

3.7 Field-Testing of the Instrument

The instrument was pilot-studied on twenty (20) undergraduate actors from University of Lagos, Akoka. They were subjected to validation of the instrument that possessed similar characteristics with participants but they were not to be part of the main participants for the study.

3.8 Procedure for Data Collection

A letter of introduction was collected from the Head, Department of Theatre Arts, University of Ibadan, Ibadan to the Management of Obafemi Awolowo University, Ile-Ife, Nigeria. The researcher explained the purpose of the study to participants and the consent forms were distributed. However, only those who indicated genuine interest to participate and their consent forms duly signed were included in the study.

3.9 Procedure for Data Collection of Body Measurements

The first part of the data collection was the body measurement of the different postures as they affect breathing in the participants at pretest and posttest phases. The aim is to observe how the participants progressed from their habitual patterns to embodying the principles of the pedagogy in training. This was carried out using measuring tapes, scales for height and weight.

3.10 Procedure for Data Analysis

The second part of the analysis was the collection of completed copies of the research instrument at pretest and posttest, coded and analysed using descriptive statistics of frequency counts and percentages for participants' demographic characteristics. Inferential statistics of Analysis of Covariance (ANCOVA) and Estimated Marginal Mean were used to test hypotheses at 0.05 alpha.

The rationale for using ANCOVA is that the research being carried out is an experimental study which has two groups of participants, and a recording and documentation of the participants' quality of vocal usage before and after the treatment. The aim is to evaluate whether population means of Dependent Variables (DV) are equal across levels of a categorical Independent Variable (IV) while statistically controlling for the effects of other continuous variables that are not primary interest, known as Covariates (CV) or nuisance variables.

3.11 Procedure for Acoustic Analysis

The third part of the analysis featured the collected voice samples at pre and post recording phases for acoustic analysis using the Audacity software (version 2.1.1; audacityteam.org). Five distinct sentences were uniformly collected from participants' using Lessac's Consonant Selection, Ola Rotimi's *Hopes of the Living Dead* due to the multi-linguistic nature of the play-text as monologue for analysis to deduce what had transpired before and after the training, and two-three phrases in each undergraduate actor's mother-tongue. The Acoustic softwares: Speech Filling System SFS/ESection Version 2.2 (2007-01-01) (c) 2007 Mark Huckvale University College London http://www.phon.ucl.ac.uk/resource/sfs, was used to determine the mean and maximum loudness levels which were typically between 20-40 dB for their monologue. PRAAT version 6.1.16 (1992-2020) by Paul Boersma and David Weenink http://www.praat.org was used to display spectrograms ofeach sentence per undergraduate actor per phase. These data were used to make comparisons between and across sentences, undergraduate actors, and phases.

3.12 Procedure for Perceptual Analysis

The fourth part featured volunteered participants as judges that comprised of nine trained speech undergraduate and graduate students in the Department of Theatre Arts and Linguistics and African Languages both of the University of Ibadan, Ibadan. The judges comprised of3 male and 6 female withage range of 25 years and above. The number of years that the judges spent studying and training in speech varied from 3 years to 8 and above. The judges listened through Ozaki speaker model: OM955 QDID: 8018966. At some point, they requested to use Havit model: headphones for clarification of distinct sounds heard from the recordings for all samples, they were established at a coherent rate. The judges had no hearing defect, or had biases about the speakers at the time of the study. The researcher received the judges' Informed consent forms in accordance with the University of Ibadan Ethical Approval Board.

3.13 Procedure for Body Measurements Analysis

The final part of the analysis was collection of body measurements of the participants' different postures as they affect breathing and posttest phase. The goal was to observe how the participants progressed from their habitual posture patterns to how they embodied the principles of the pedagogy during training. This was also carried out using measuring tapes, scales for height and weight. The pretest and posttest phases data collected were analysed using descriptive bar chart.

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

This chapter presents the results of data analysis and discussion of findings.

4.1 DEMOGRAPHIC CHARACTERISTICS OF STUDY PARTICIPANTS

Table 4.1a shows that 5 (29.4%) participants were males while 12 (70.6%) were females. The result details that there were more female participants than the male participants in the study. At the onset of the training about seven male participants were involved as a result of attrition, the study was able to record only one male participant. Studies conducted so far show greater response to vocal training and improved vocal artistry among female actors than male actors (Kitch and Oates 1994; Jurgens, et al. 2015; Walzak, et al. 2008; Murray and Moore, 1935; Barrichelo-Lindstrom and Behlau, 2007). The result is further represented in table 4.1a.

The participants of the study were 18-22 years of age (52.9%) or 23-17 (47.1%) as indicated in table 4.1b. Years of actor training experience detailed in table 4.1c shows that 76.5% of the participants had one-two years of actor training experience, while 23.5% had spent three years and above in training. Four out of the 17 participants recorded that English was their first language (table 4.1d) while 13 recorded various Nigerian languages as their first language – mainly from the Benue-Congo branch of the Niger-Congo family – Yoruba, Hausa, Igala, Igbo etc.

Table 4.1a: Gender Distribution of the Study Participants

Gender	Frequency	Percentage
Male	5	29.4
Female	12	70.6
Total	17	100.0

Table 4.1b Ages of the Study Participants

Ages	Frequency	Percentage
18-22	9	52.9
23-27	8	47.1
Total	17	100.0

Table 4.1c Years of Experience of the Study Participants

Years of Experience	Frequency	Percentage
1-2 years	13	76.5
3 years and above	4	23.5
Total	17	100.0

Table 4.1d First Language of the Study Participants

First Language	Frequency	Percentage
English	4	23.5
Nigerian Languages	13	76.5
Total	17	100.0

4.2 Research Questions.

4.2.1 Research Question 1: What are the pretest and posttest scores of vocal pedagogy used in actor training across the two experimental and control groups?

Table 4.2.1 shows that there was substantial difference in the vocal pedagogy used in actor training at posttest for the treatment group 10 (58.8%) as against the 0 (0%) at pretest. This implies that the treatment group focused more on Lessac Kinesensic while the control group continued in the use of student-to-student method. The observation is that the undergraduate actors generally use hands-on tools i.e. styles they read up in books and they also clearly stated the use of phonetic training to improve their pronunciations.

4.2.2 Research Question 2: What does the vocal pedagogy focus on at pretest and posttest of actor training before and after the treatment?

Table 4.2.2 revealed that there was substantial difference in the aspects that the vocal pedagogy in use focused on voice, speech, body and mind at 10 (58.8%) at posttest for the treatment group. While at pretest for both groups the focus of the vocal pedagogies they employed is as follows: for voice 11 (64.7%), for speech was 4 (23.5%) and for voice and speech was 2 (11.8%) while none focused on body and mind. This describes the effect of the vocal pedagogy in use for the study on the participants in order to create an embodied actor.

4.2.3 Research Question 3: To what degree do undergraduate actors memorise the principles of a vocal pedagogy for performance?

Table 4.2.3 shows that there were substantial improvements to the degree that the participants memorised the vocal pedagogy's principles. Statistics shows that (35.3%) of undergraduate actors at pretest, agreed to somewhat degree, memorised the supposed vocal pedagogy they applied to their performance, (17.6%) agreed to very little degree at pretest and posttest, (29.4%) said quite a bit, while (17.6%) disclosed to a lot of degree that they memorised the principles at both phases, if there were ever known principles. While at posttest, (35.3%) indicated "not at all" degree to memorising the vocal

pedagogy's principles during performance, (23.5%) agreed to "somewhat" degree to the memorising the vocal pedagogy's principles in training during performance.

4.2.4 Research Question 4: What are the pre and posttest knowledge scores of Lessac Kinesensic across the two experimental groups?

Table 4.2.4 revealed that there was a substantial positive response between the groups on how knowledgeable they were about Lessac Kinesensic at posttest. It is indicative that (35.3%) which make up the control group had no idea about Lessac Kinesensic, (35.3%) of the treatment group agreed that through the training they were "quite a bit", and (29.4%) indicated to be "a lot' more knowledgeable about Lessac Kinesensic.

4.2.5 Research Question 5: There will be significant main effect of years of actor training, first language and treatment on vocal expression among undergraduate actors?

Table 4.2.5 shows that year of training [$F_{(1,12)}$=.017; p>.05] and first language [$F_{(1,12)}$=.639; p>.05] had no significant main effect on vocal expression among the participants. However, treatment [$F_{(1,12)}$=24.860; p<.05] had a significant main effect on vocal expression among the participants. The results imply there was no significant difference in vocal expression between participants who had more or less years of training. Similarly, there was no significant difference in vocal expression between participants who spoke English or Nigerian languages as their first language. However, there was a significant difference in vocal expression between participants who received treatment (LKT) and those who did not receive treatment (LKT). An estimated margin of means was used to determine the direction of effect among the variables. Results are presented in the following tables.

Results from Table 4.2.5a shows that the participants with 1-2 years of training exhibited higher vocal expression with a mean score of 40.55 while participants with 3 or more years of training recorded lower vocal expression with a mean score of 32.00. The difference is however not statistically significant.

Table 4.2.1: Vocal Pedagogy used in Actor Training across the Groups

VOCAL PEDAGOGY	Pre Test		Post Test	
	Frequency	Percent	Frequency	Percent
Berry	0	0.0	0	0.0
Lessac Kinesensic	0	0.0	10	58.8
Knight-Thompson Speechwork	0	0.0	0	0.0
Student-to-Student	17	100.0	7	41.2
TOTAL	17	100.0	17	100.0

Results from Table 4.2.5b shows that the participants with English as their first language exhibited higher vocal expression with a mean score of 39.16 while participants with a Nigerian Language as their first language recorded lower vocal expression with a mean score of 32.00. The difference is however not statistically significant.

Results from Table 4.2.5c shows that the participants who received treatment exhibited higher vocal expression with a mean score of 44.66 while participants who received no treatment recorded lower vocal expression with a mean score of 32.11.

4.2.6: Research Question 6

Will there be significant main effect of years of actor training, first language and treatment on intelligibility among undergraduate actors?

Results from Table 4.2.6 show that year of training [$F_{(1,12)}$=.298; p>.05] and first language [$F_{(1,12)}$=.323; p>.05] had no significant main effect on intelligibility among the participants. However, treatment had a significant main effect on intelligibility [$F_{(1,12)}$=10.091; p>.05] among the participants. The results imply that there was no significant difference in intelligibility between participants who had more or less years of training. Similarly, there was no significant difference in intelligibility between participants who spoke English or Nigerian language as their first language. However, there was a significant difference in intelligibility between participants who received treatment (LKT) and those who did not receive treatment. An estimated margin of mean was used to determine the direction of effect among variables. Results are presented in the following tables.

Results from Table 4.2.6a shows that the participants with 1-2 years of training exhibited higher levels of intelligibility with a mean score of 30.17 while participants with 3 or more years of training recorded lower levels of intelligibility with a mean score of 21.50. The difference is however not statistically significant.

Table 4.2.2: Focus of Vocal Pedagogy on Actor Training before and after the Treatment

VOCAL PEDAGOGY	Pre Test		Post Test	
	Frequency	Percent	Frequency	Percent
Body	0	0.0	0	0.0
Mind	0	0.0	0	0.0
Voice	11	64.7	7	41.2
Speech	4	23.5	0	0.0
Voice and Speech	2	11.8	0	0.0
Voice, Speech, Mind and Body	0	0.0	10	58.8
TOTAL	17	100.0	17	100.0

Table 4.2.3: Memorisation of the Principles of Vocal Pedagogy used by Participants Before and After Treatment

MEMORISATION OF VOCAL PEDAGOGY'S PRINCIPLES	Pre Test		Post Test	
	Frequency	Percent	Frequency	Percent
Not at All	0	0.0	6	35.3
Very Little	3	17.6	3	17.6
Somewhat	6	35.3	4	23.5
Quite a Bit	5	29.4	1	5.9
A Lot	3	17.6	3	17.6
TOTAL	17	100.0	17	100.0

Table 4.2.4: Lessac Kinesensic Knowledge Scores of Participants across the Groups

KNOWLEDGE OF LESSAC KINESENSIC	Pre Test		Post Test	
	Frequency	Percent	Frequency	Percent
Not at All	17	100.0	7	35.3
Very Little	0	0.0	0	0.0
Somewhat	0	0.0	0	0.0
Quite a Bit	0	0.0	7	35.3
A Lot	0	0.0	3	29.4
TOTAL	17	100.0	17	100.0

Table 4.2.5: Summary of ANCOVA Table Showing Main and Interaction Effects of Years of Actor Training, First Language and Treatment on Vocal Expression

Dependent Variable: Expression

Model	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
1	Corrected Model	39.851	3	13.284	.649	.598	.130
	Intercept	9694.010	1	9694.010	473.293	.000	.973
	Years of Training	11.293	1	11.293	.551	.471	.041
	First Language	14.916	1	14.916	.728	.409	.053
	Treatment	.000	0	.	.	.	.000
	Error	266.267	13	20.482			
	Total	17080.000	17				
	Corrected Total	306.118	16				
2	Corrected Model	602.431	4	150.608	15.679	.000	.839
	Intercept	13838.787	1	13838.787	1439.874	.000	.992
	Years of Training	.167	1	.167	.017	.897	.001
	First Language	6.140	1	6.140	.639	.440	.001
	Treatment	238.933	1	238.933	24.860	.000	.070
	Error	115.333	12	9.611			
	Total	26731.000	17				
	Corrected Total	717.765	16				

Table 4.2.5a:Estimated Marginal Meanof Years of Training on Vocal Expression

Dependent Variable: Expression

Years of Training	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1-2	40.556[a]	.930	38.530	42.581
3 or more	32.000[a]	1.790	28.100	35.900

a. Based on modified population marginal mean.

Table 4.2.5b: Estimated Marginal Meanof First Language on Vocal Expression

Dependent Variable: Expression

First Language	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
English	39.167[a]	1.790	35.267	43.067
Nigerian Language	35.778[a]	.930	33.752	37.804

a. Based on modified population marginal mean.

Table 4.2.5c: Estimated Marginal Mean of Treatment on Vocal Expression

Dependent Variable: Expression

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	32.111[a]	1.334	29.204	35.018
Treatment	44.667[a]	1.070	42.336	46.997

a. Based on modified population marginal mean.

Results from Table 4.2.6b shows that the participants with English as their first language exhibited lower levels of intelligibility with a mean score of 26.50 while participants with a Nigerian Language as their first language recorded higher levels of intelligibility with a mean score of 26.84. The difference is however not statistically significant.

Results from Table 4.2.6c show that participants who received treatment recorded higher levels of intelligibility with a mean score of 32.90 while participants who received no treatment recorded lower levels of intelligibility with a mean score of 23.29.

Table 4.2.6: Summary of ANCOVA Table Showing Main and Interaction Effects of Years of Actor Training, First Language and Treatment on Intelligibility

Dependent Variable: Intelligibility

Model	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
1	Corrected Model	15.963	3	5.321	.289	.833	.062
	Intercept	4228.710	1	4228.710	229.469	.000	.946
	Years of Training	3.352	1	3.352	.182	.677	.014
	First Language	1.767	1	1.767	.096	.762	.007
	Treatment	.000	0	.	.	.	.000
	Error	239.567	13	18.428	.096		
	Total	8705.000	17				
	Corrected Total	255.529	16				
2	Corrected Model	397.417	4	99.354	7.117	.004	.703
	Intercept	7027.954	1	7027.954	403.424	.000	.977
	Years of Training	4.167	1	4.167	.298	.595	.001
	First Language	4.511	1	4.511	.323	.580	.001
	Treatment	140.876	1	140.876	10.091	.008	.084
	Error	167.524	12	13.960			
	Total	14804.000	17				
	Corrected Total	564.941	16				

Table 4.2.6a: Estimated Marginal Mean of Years of Training on Intelligibility

Dependent Variable: Intelligibility

Years of Training	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1-2	30.175[a]	1.121	27.733	32.616
3 or more	21.500[a]	2.157	16.800	26.200

a. Based on modified population marginal mean.

Table 4.2.6b: Estimated Marginal Meanof First Language on Intelligibility

Dependent Variable: Intelligibility

First Language	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
English	26.500[a]	2.157	21.800	31.200
Nigerian Language	26.841[a]	1.121	24.400	29.283

a. Based on modified population marginal mean.

Table 4.2.6c: Estimated Marginal Meanof Treatment on Intelligibility

Dependent Variable: Intelligibility

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	22.556[a]	1.608	19.052	26.059
Treatment	32.929[a]	1.289	30.120	35.737

a. Based on modified population marginal mean.

4.3 The Effects of Breathing and Posture on Body Measurements

Research has shown the importance and impact of breath and posture on voice, speech, body and mind of the actor in performance. Voice and speech which have been discussed in earlier chapters reflect the personality of the actor, which will be discovered in the findings of the study and Lessac (1997:20) supports that "they reflect our personalities but they can also exemplify or betray the physical condition of our bodies". The human body is structured in a way that it contracts, bends, twists and importantly is flexible. It demands a letting go of strain, tension and stress. Lugering supports James I. Kepner's (2013:71) definition of body structure in his book *The Expressive Actor: Integrated Voice, Movement and Acting Training* as "the way we shape ourselves and have been shaped by our life experiences". These experiences gradually transcend into how the individual as an actor develops good or bad posture. In the overall, this leads to how the undergraduate actor is able to express herself in a convincing manner in performance.

Lugering (2013:71) further informs us that body structure refers to the organisation of the whole body...and creates a flexible body structure...is a prerequisite for integrated expressive action" regardless of the intensity of the character being portrayed. This study pinpoints on the need for expression and intelligibility in performance, by investigating how the undergraduate actors align their spine in performance. It should be stated clearly here the designation of the spine to human beings and actors especially as they move through the stage with their dialogues. The spine as observed "is designed to transfer the weight of the head, shoulders, arms, and rib cage downward into the pelvis" (Lugering, 2013:91). With the spine achieving this economically and efficiently it results in an optimal alignment and by default brings about a responsive and expressive actor – which otherwise leads to poor performance in expression. The expressive and intelligible undergraduate actor in the end finds herself not struggling with correct body posture in performance but how the posture moves through space in performance without the obstruction of breath.

Breathing exercises have proved to be an indispensable aspect of actor training. Breath settles on the energies displayed in performance and Lessac Kinesensic pedagogy invites the actor to "smell the flower" or "smell what is pleasurable to you". These phrases allow

the undergraduate actor to explore in an experiential way through body posture on what is happening to her breath as she thinks and vocalises dialogue. Breath is always at work on how undergraduate actors convey messages which can lead to obstructions in the emotions, energies, imaginations and language of expression (if L2) of the undergraduate actors. Breathing properly will mean better posture, and the ability to exercise the muscles responsible for everyday activity of which speech is one if not paramount. Boston (2006), on the other hand, has seen the effectiveness on the emotional stability of the actor and how improving upon it through right breathing, has created intelligibility and character realisation in the actor.

Since the thrust of the study is to see how effective Lessac Kinesensic is to the vocal expression of the Nigerian undergraduate actor, there was the need to observe the body posture; body measurements; and how they aligned with the breath of the participants during training. Lessac in his book ***The Use and Training of the Human Voice*** describes the poor and upright postures which was a guide for this study. These measurements were carried out at pretest and posttest of the study.

4.3.1 Breathing and Posture Body Measurement – Across Shoulders

Figure 4.3.1 shows that body posture measurements across shoulders significantly improved in eight (8) out of the ten (10) participants with an increase of 0.5" to 1", Table 4.3.1 gives a display of the participants' performance in frequency. While participants #7 and #9 did not record any changes, they both retained 16" and 15.5" at pretest and pottest respectively. This implies that breath and posture in relation to across shoulders had a significant cumulative effect on the particpants.

4.3.2 Breathing and Posture Body Measurement – Full Upright Posture

Figure 4.3.2 show the participants full upright postures at pretest and posttest levels. Participant #1 is perceived to have retained her habitual posture pattern at pretest and posttest phases, while the remaining nine participants had significant cumulative effect of the training in the proper full upright postures recording an increase of 0.041" to 0.083". The pretest poor posture could be as a result of retraction, protraction, and depression of the muscles of the scapula, and the bones of the vertebra and vertebral column (Kapit and

Elson 2014) which are habitual posture patterns. This indirectly affects proper full upright posture and also breathing pattern as displayed by Table 4.3.2.

4.3.3 Breathing and Posture Body Measurement – Cervical Spine

Figure 4.3.3 shows the posture of the cervical spine (neck) at improper and proper postures. Participant #7 did not make any significant change. Table 4.3.3 gives a clearer picture of frequency in participants that had made significant impact in the postures. For the other participants the observation in the improper posture of their cervical spine, according to them, was the constant use of their mobile phones for watching movies, chatting and playing games, which became a carryover to their habitual way of having a cervical spine posture tilted forward most of the time.

4.3.4 Breathing and Posture Body Measurement – Spine to Coccyx

Figure 4.3.4 is a description of the spine to the coccyx (small bone at base of spine) which shows a progression from pretest to posttest of the participants. Table 4.3.4 displays a frequency of improved participants. Much cannot be documented by participants #3, #4, #6 and #7 that all recorded 33.5", 30.5", 32.5" and 32.5" at pre-test and post-test respectively. While others increased by 0.5" to 2.0". Very often there is a tendency for actors not to exercise their bones especially the spinal cord which leads from the neck down to the coccyx. The bones there due to the joints are bending, twisting and extending which gives an overall healthy performance to the undergraduate actor without pains.

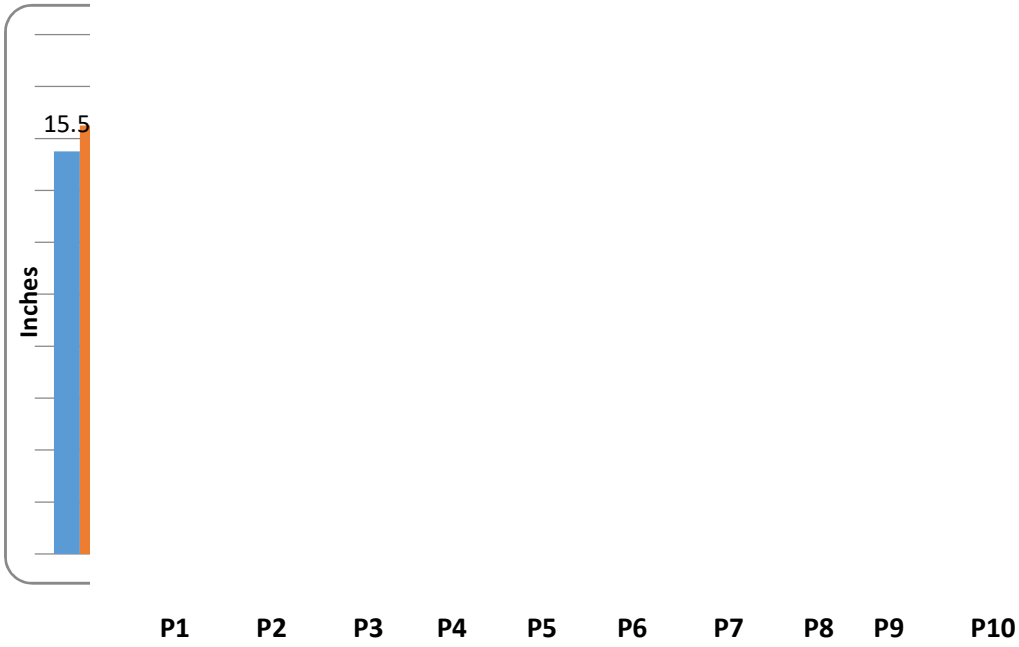


Figure 4.3.1 Breathing and Posture Body Measurement – Across Shoulders (Inches)

Table 4.3.1 Breathing and Posture Body Measurement – Across Shoulders (Inches)

Increase in Inches	Frequency	Percentage
0"	2	20%
0.5"	5	50%
1.0"	3	30%
Total	10	100%

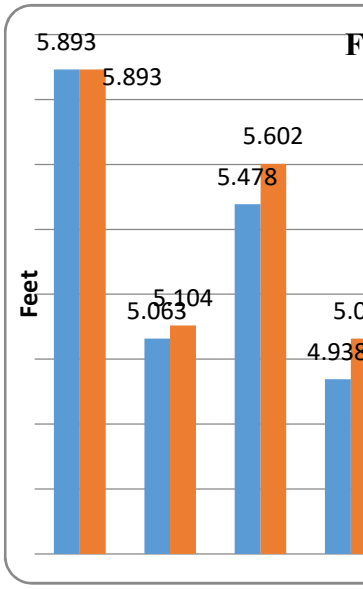


Figure 4.3.2 Breathing and Posture Body Measurement – Full Upright Posture (Feet and inches)

Table 4.3.2 Breathing and Posture Body Measurement – Full Upright Posture (Feet and inches)

Participants	1	2	3	4	5	6	7	8	9	10
Pre-test	5.893	5.063	5.478	4.938	5.519	5.229	5.561	5.436	5.353	5.644
Post-test	5.893	5.104	5.602	5.063	5.602	5.27	5.602	5.478	5.395	5.685
Increase	0	0.041	0.124	0.125	0.083	0.041	0.041	0.042	0.042	0.041

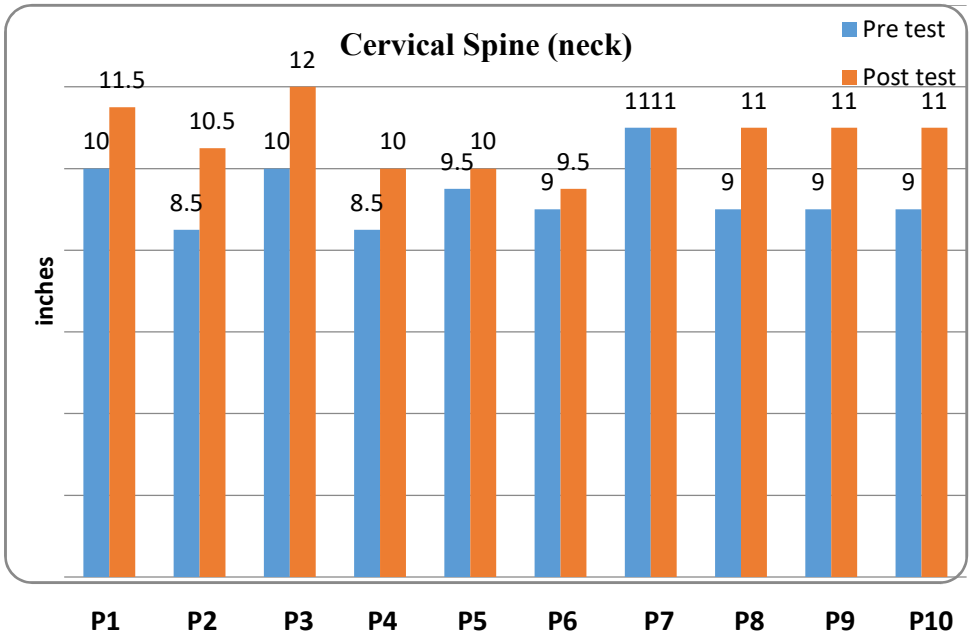


Figure 4.3.3 Breathing and Posture Body Measurement – Cervical Spine (inches)

Table 4.3.3 Breathing and Posture Body Measurement – Cervical Spine (inches)

Increase in Inches	Frequency	Percentage
0"	1	10%
0.5"	2	20%
1.0"	0	0%
1.5"	2	20%
2.0"	5	50%
Total	10	100%

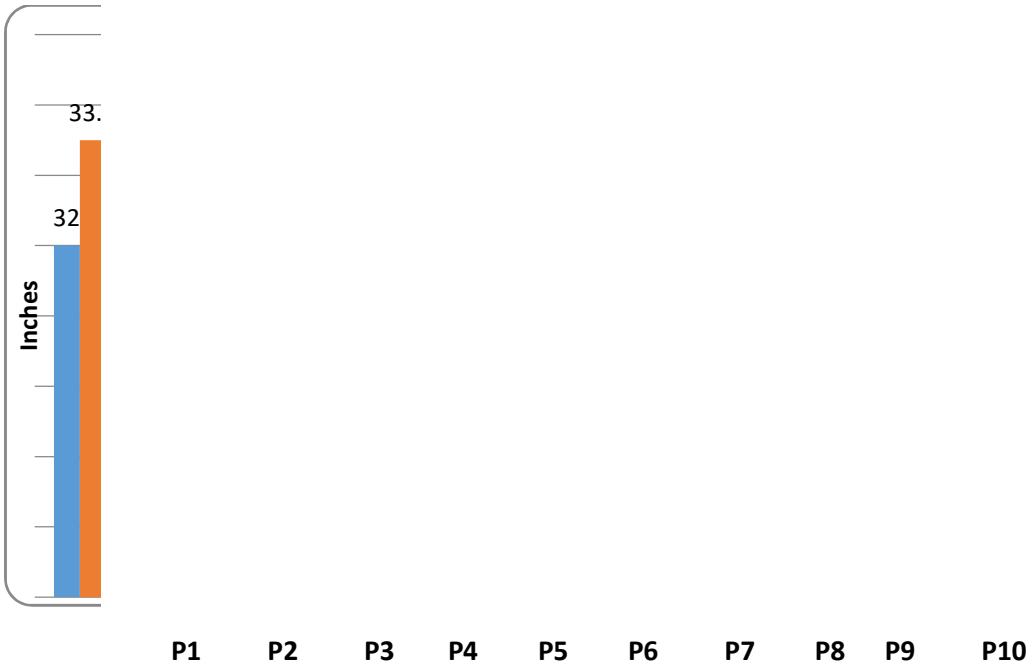


Figure 4.3.4 Breathing and Posture Body Measurement – Spine to Coccyx (inches)

Table 4.3.4 Breathing and Posture Body Measurement – Spine to Coccyx (inches)

Increase in Inches	Frequency	Percentage
0"	3	30%
0.5"	1	10%
1.0"	2	20%
1.5"	1	10%
2.0"	3	30%
Total	10	100%

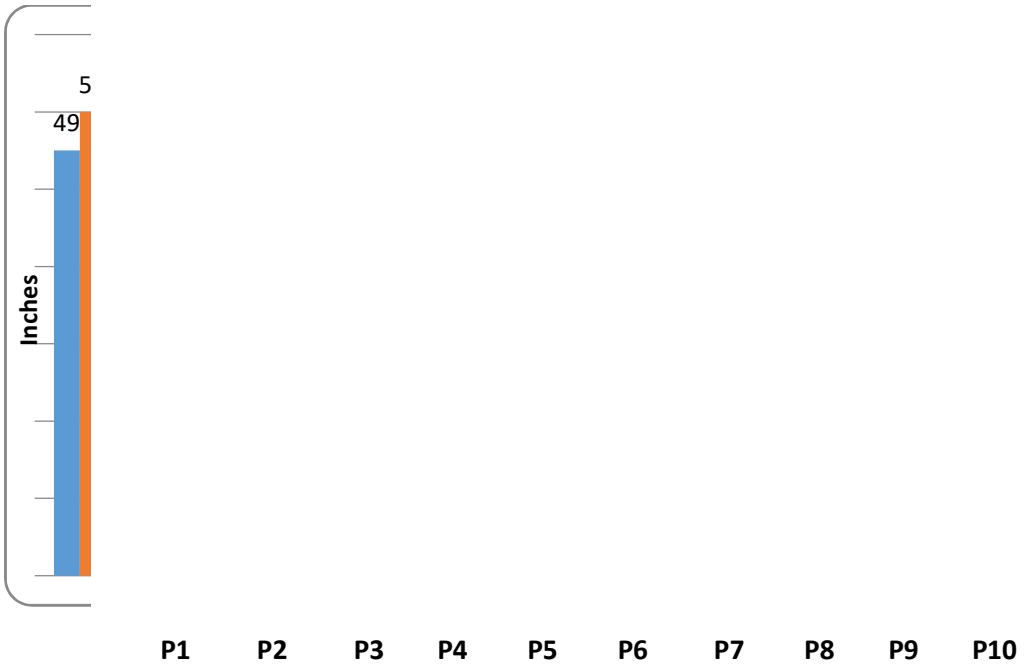


Figure 4.3.5 Breathing and Posture Body Measurement – Spine to Knee Hollows

Table 4.3.5 Breathing and Posture Body Measurement – Spine to Knee Hollows

Increase in Inches	Frequency	Percentage
0"	3	30%
0.5"	2	20%
1.0"	3	30%
1.5"	1	10%
2.0"	0	0%
2.5"	1	10%
Total	10	100%

4.3.5 Breathing and Posture Body Measurement – Spine to Knee Hollows

Figure 4.3.5 is a clear indication of what individuals as well as actors do with their knees. A good posture will not require locked joint knees; tighten thigh muscles; or tilting of the pelvis backward. From Table 4.3.5, all the participants' postures had a titling backward of the cervical spine, backward knee hollows and improper breathing which affected their posture at pretest. At posttest there was a cumulative significant effect as they increased by 0.5" to 2.5" at posttest except for participants #4 and #6 that had no substantive effect in their measurements.

4.3.6 Breathing and Posture Body Measurement – Proper Chest Expansion

Breath is a tool for the speaking and singing actor that requires proper understanding and adequate exercises. It is important for the actor to understand the way it works in dialogue on stage. Proper expansion of the chest when oxygen is taken in to indicate how much air can be challenging for the actor as observed in the habitual breathing in all of the participants at both phases. Figure 4.3.6 shows participants #9 and #10 who had no recorded significant improvement. Other participants varied between 0.5" to 2" as observed in Table 4.3.6. The observation in the study also showed that the participants had tightening of body, locked knees and did thoracic or clavicular breathing which is harmful to the voice and speech of the actor.

4.3.7 Body Measurement – Weight

Figure 4.3.7 shows that the participants reduced in weight during the duration of the training which lasted eight weeks. It further shows a display of participants that had same bodyweight throughout the training. This can account for how they worked on the body through self-exploration and self-awareness. Body explorations carried out during the training was not an attempt for weight gain or weight loss but since they played with purpose, there was a positive impact in shedding of weight. Table 4.3.7 displays participants #3, #4, and #8 who did not lose weight, while participants #1 and #7 gained weight and participants #2, #5, #6, #9 and #10 reduced in their weight. Other factors may be responsible for this weight loss and gain but may not be significant for the study.

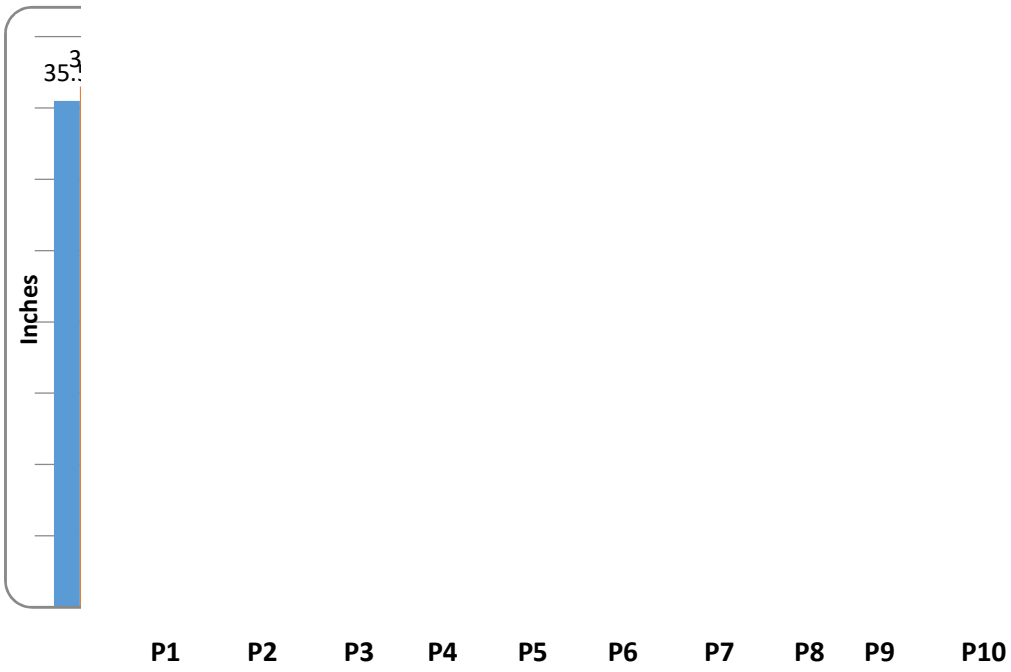


Figure 4.3.6 Breathing and Posture Body Measurement – Proper Chest Expansion

Table 4.3.6 Breathing and Posture Body Measurement – Proper Chest Expansion

Increase in Inches	Frequency	Percentage
0"	2	20%
0.5"	2	20%
1.0"	3	30%
1.5"	3	30%
Total	10	100%

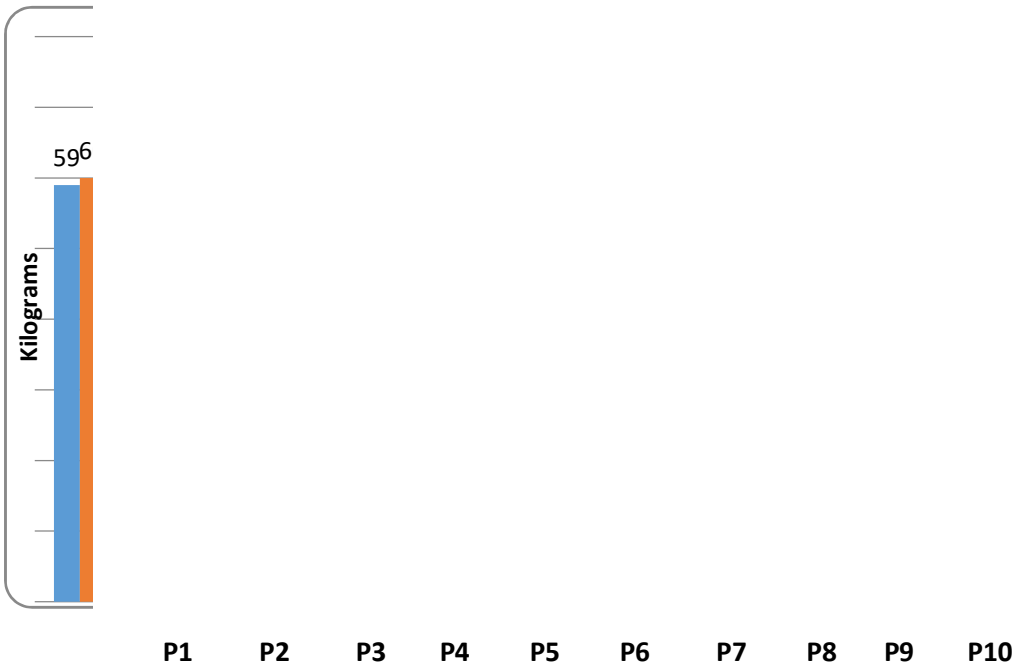


Figure 4.3.7 Body Measurement – Weight

Table 4.3.7 Body Measurement – Weight

Participants	1	2	3	4	5	6	7	8	9	10
Pre-test	59kg	49kg	54kg	45kg	67kg	74kg	60kg	69kg	57kg	55kg
Post-test	60kg	45kg	54kg	45kg	65kg	74kg	61kg	69kg	55kg	54kg
Decrease	-	4kg	-	-	2kg	-	-	-	2kg	1kg
Increase	1kg	-	-	-	-	-	1kg	-	-	-
Static	-	-	-	-	-	-	-	-	-	-

4.4 Acoustic Analysis

After recording each participant in all four speech styles: prose reading, dramatic reading, monologue and first language, the collected voice samples were recorded using Sony Sound Organiser Version 1.5.0.10210. The editing software Audacity (version 2.0.2; audacity.sourceforge.net) was then used to segment them. For assessment, five unique phrases were chosen fromLKT *Consonant Selection:*"**The old resident of the neighbourhood bitterly condemned the characteristic tirades and unchristian behaviour displayed by government, business and police representatives.**" "**He succinctly dismissed the "good will" myths so sanctimoniously projected by local social scientists.**" "**The effects of the holocaust throughout the city's precincts are overwhelming;**" "**The destruction includes the length and breadth of the shopping districts.**" and "**The indignant urban population is as tense as a tightened fiddle string; nine-tenths of them would rather live in pup tents...**" These sentences were selected from each participant's recorded speech due to the nature of the study in terms of considering the consonant sounds expected to be thoroughly articulated, for intelligibility and vocal expression by the participants.

Three aspects were considered in the overall assessment of the acoustic discoveries: the frequency, the decibel and, a comparative studyof duration of each speech explorations at both phases. The distance between the mouth and microphone were kept constantly at 60cm as well as control of the volume level of the recordings at both phases to determine the effect of LKT to the participants. Regardless of how long or short a phrase or a sentence was, the purpose was to consider how the participants articulated each sound and linked it to words and sentences.

The Power Spectrum Frequency (PSF) which is the distribution of power into frequency components composing that signal over a continuous range, was kept between 0 Hz and 5000Hz (Y-axis in blue of the graph). As observed by Munro, et al, (2009), that the tonal action of LKT develops a full pitch, range, power and projection for the voice and improves quality…producing rich and dynamic tones. As a result of this, theintensity was kept between 50dB and 150dB. This was measured by normal conversation and how the

participants' mind and body energy vocalised the piece given that was read. These were to be observed as characteristic of a good speaking voice regardless of the gender.

The Acoustic software: SFS/ESection Version 2.2 (2007-01-01) (c) 2007 Mark Huckvale University College London http://www.phon.ucl.ac.uk/resource/sfs and PRAAT version 6.1.16 (1992-2020) by Paul Boersma and David Weenink http://www.praat.org were used to determine the loudness (dB) mean and maximum, prominent peaks, less steeper slope as also observed in studies by (Leino, 1993; Leino and Karkkainen, 1995; Raphael and Scherer, 1987; Leino,and Radolf, 2011; and Vampola, et. al. 2011) and duration levels for each sentence per participant at pretest and posttest levels. These data were used to comparethe vocal output of the undergraduate actors at pretest and posttest phases between each sentence.

Figure 4.4 shows the differences in minimum intensity (dB) levels for each participant across the five (5) sentences at pretest and posttest. The stage actor has a tendency to increase voice volume at every slight opportunity given to express a thought or render a memorised dialogue/monologue. The training, however, retrained the participants to express in a purposeful manner that is not noisy which is documented in figure 4.4a. Some participants had increased dB levels while some had slight reduced dB levels.

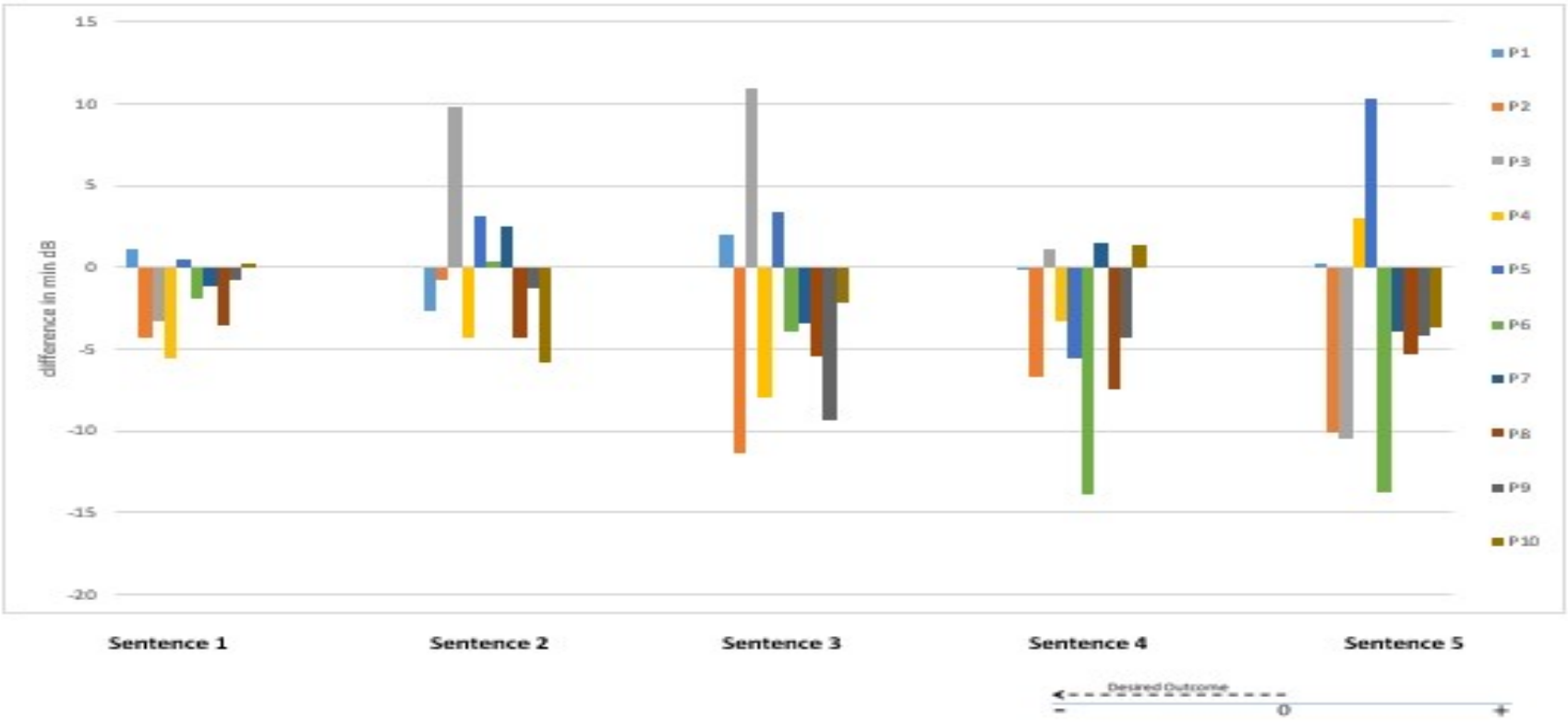


Figure 4.4: Difference in minimum intensity (dB) levels for each participant across sentences at pretest and posttest

4.4.1 Sentence 1: "The old resident of the neighbourhood bitterly condemned the characteristic tirades and unchristian behaviour displayed by government, business and police representatives."

Improved Lessac Kinesensic Training effect on vocal expression and intelligibility were observed for sentence 1 in the renditions by participants #9, #1, #2, #8, and #10 who recorded differences of -28.82dB, -22.57dB, -20.26dB, -18.54dB, -18.23dB, -18.04dB and -16.66dB respectively in maximum intensity between pretest and posttest. But most significant were the results of participants #9, #1, #7 while poor results in sentence 1 were observed among participants #6, #5 and #3 who recorded differences of -9dB, -2.59dB, and -1.51dB respectively in minimum intensity between pretest and posttest. The spectrographs give a detailed account of participants' #9, #1, #7and #2 at pre and post recordings.

4.4.2 Sentence 2: "He succinctly dismissed the "good will" myths so sanctimoniously projected by local social scientists."

Best results in sentence 2 were observed in renditions by participants #2, #8, #3, #10 and #1 who recorded increase in number of peaks with highest value from pre to post recording of 4394Hz – 4750Hz, 2947Hz – 3212Hz, 3537Hz – 4070Hz, 2916Hz – 3300Hz and 2687Hz – 3410Hz respectively with minimum intensity differences between pretest and posttest ranging at -0.78dB, -4.27dB, 9.8dB, and -5.76dB. While outstanding performances were noted for participants #2, #8, and #10, poor results in sentence 2 were observed among participants #7, #5 and #6 who recorded differences in minimum intensity between pretest and posttest recordings of 2.44dB, 3.12dB and 0.36dB respectively. The spectrogram display of participants #2, #8, and #10 are presented in figure 4.4.2a, 4.4.2b, and 4.4.2c.

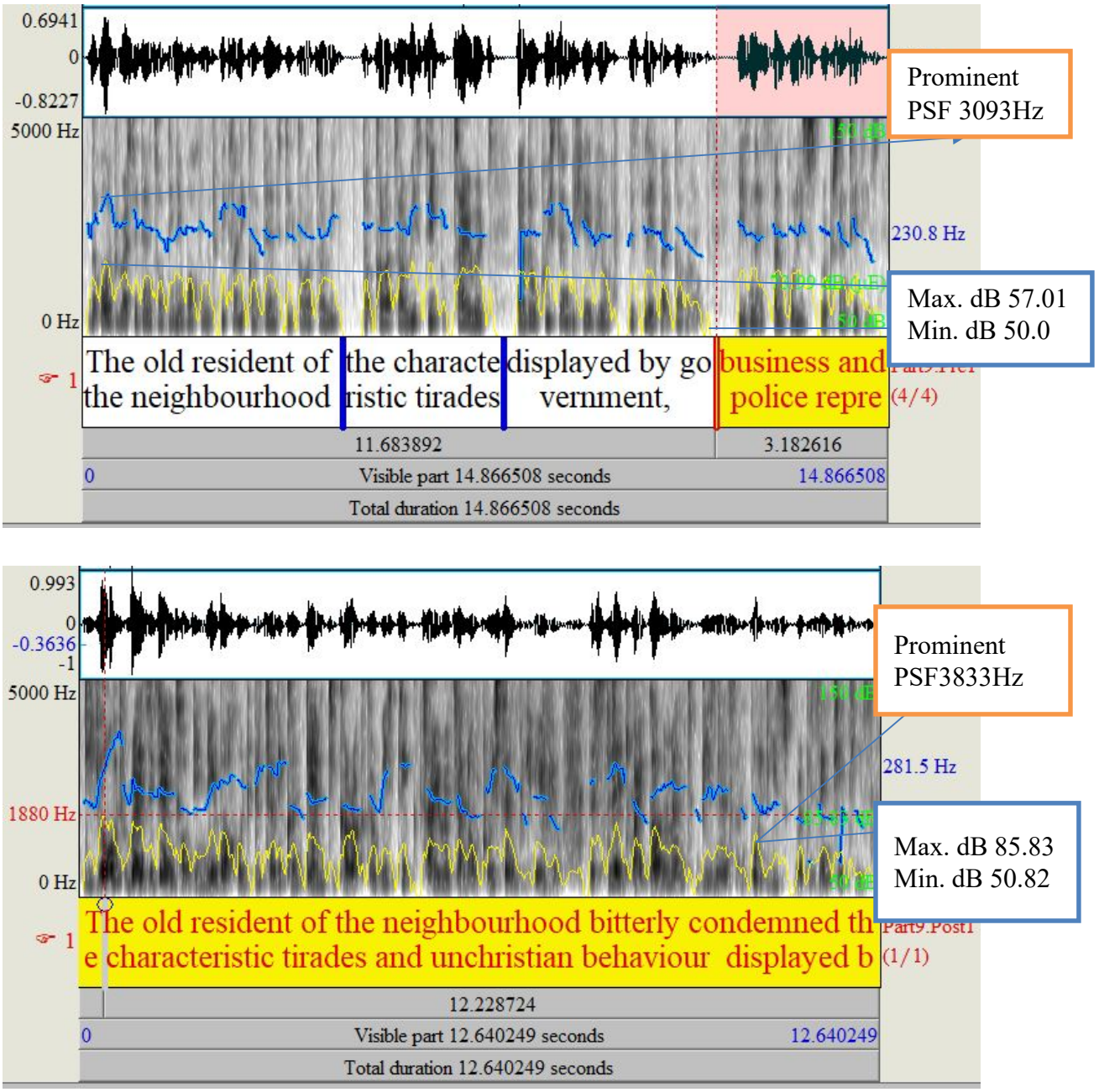


Figure 4.4.1afrequency and intensity spectrogram of sentence 1 for participant 9pre and post recording

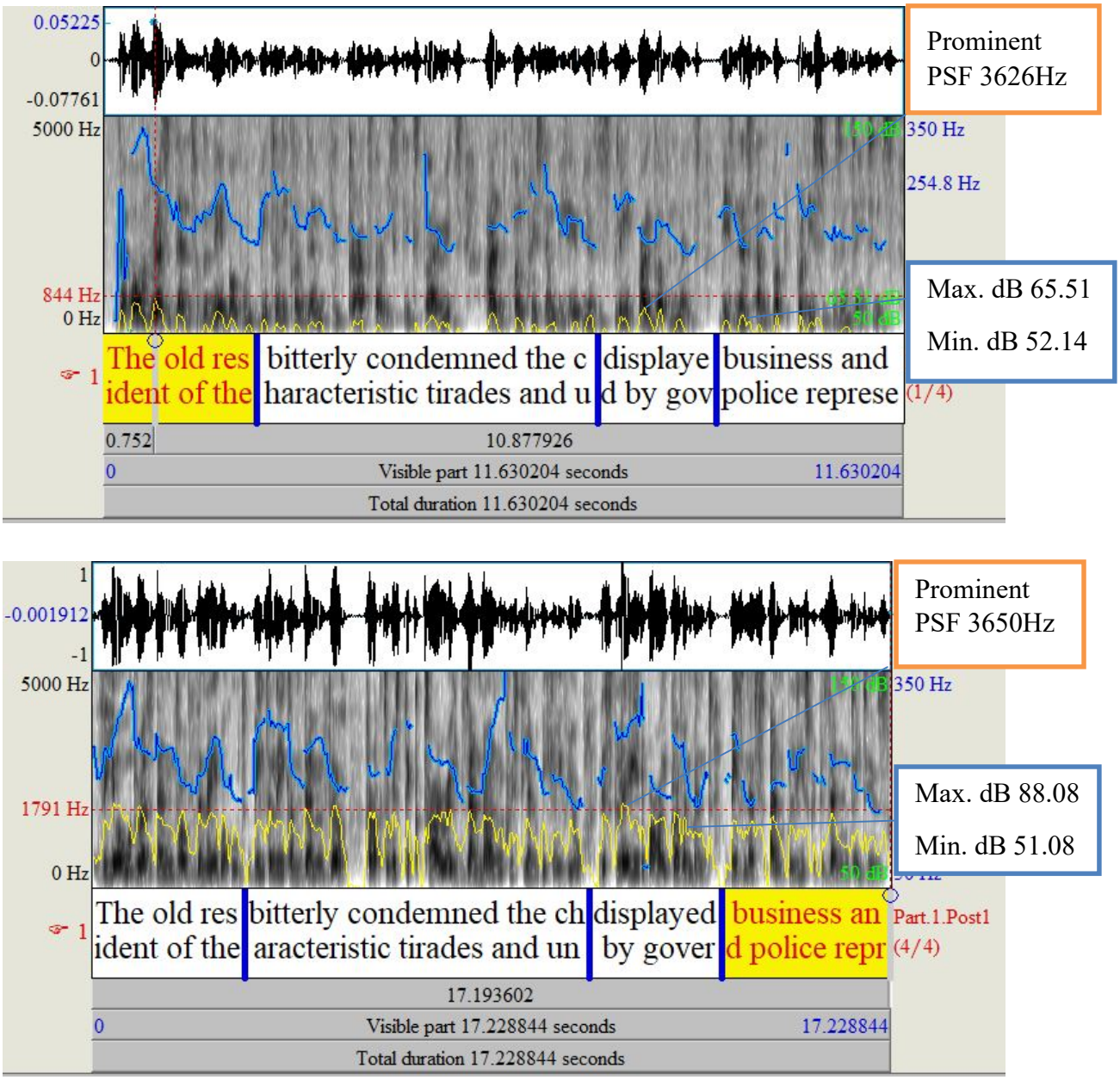
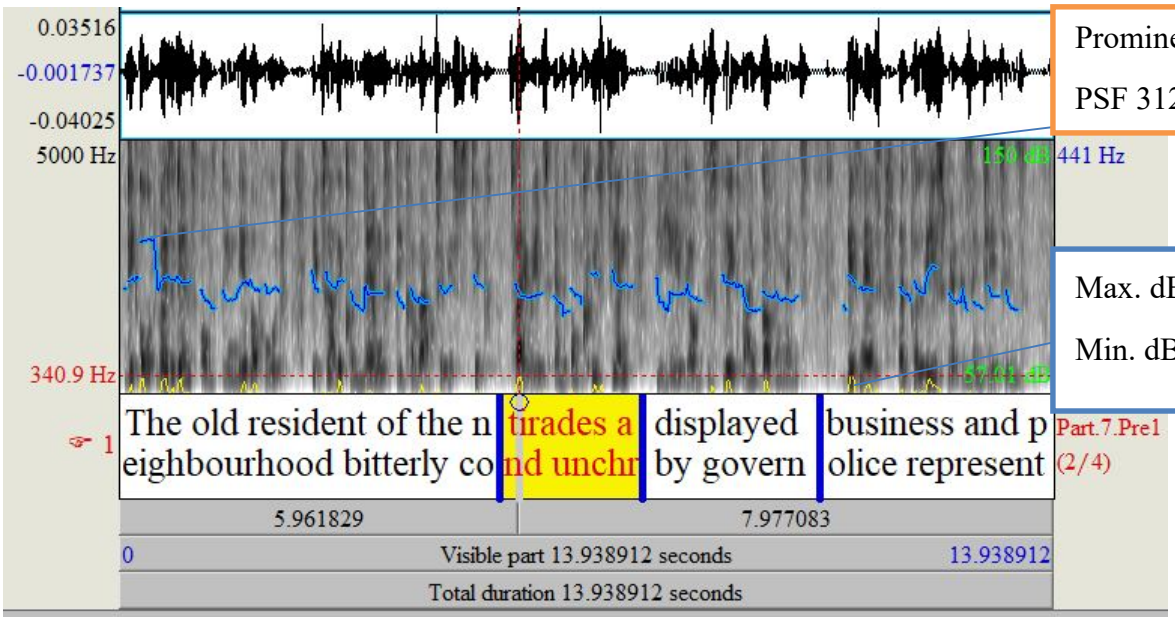


Figure 4.4.1bfrequency and intensity spectrogram of sentence 1 for participant 1 pre and post recording


0.03516
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Total duration 13.938912 seconds
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PSF 3123Hz
Max. dB 52.66
Min. dB 50.36
Prominent
PSF 3152Hz
Max. dB 87.23
Min. dB 54.29

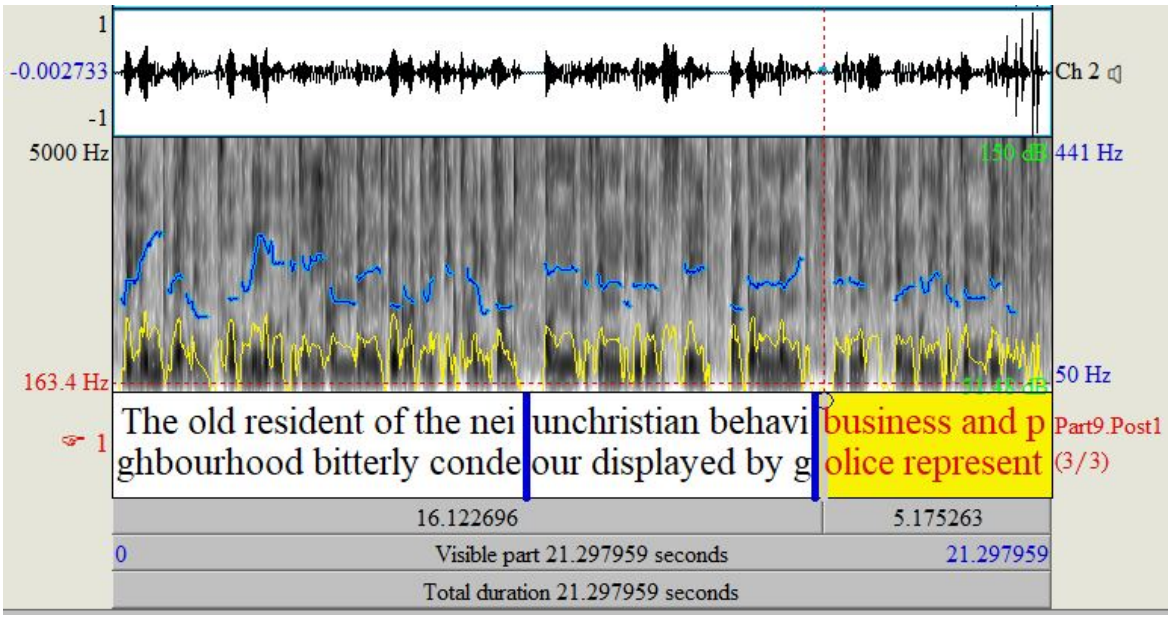


Figure 4.4.1cfrequency and intensity spectrogram of sentence 1 for participant 7 pre and post recording

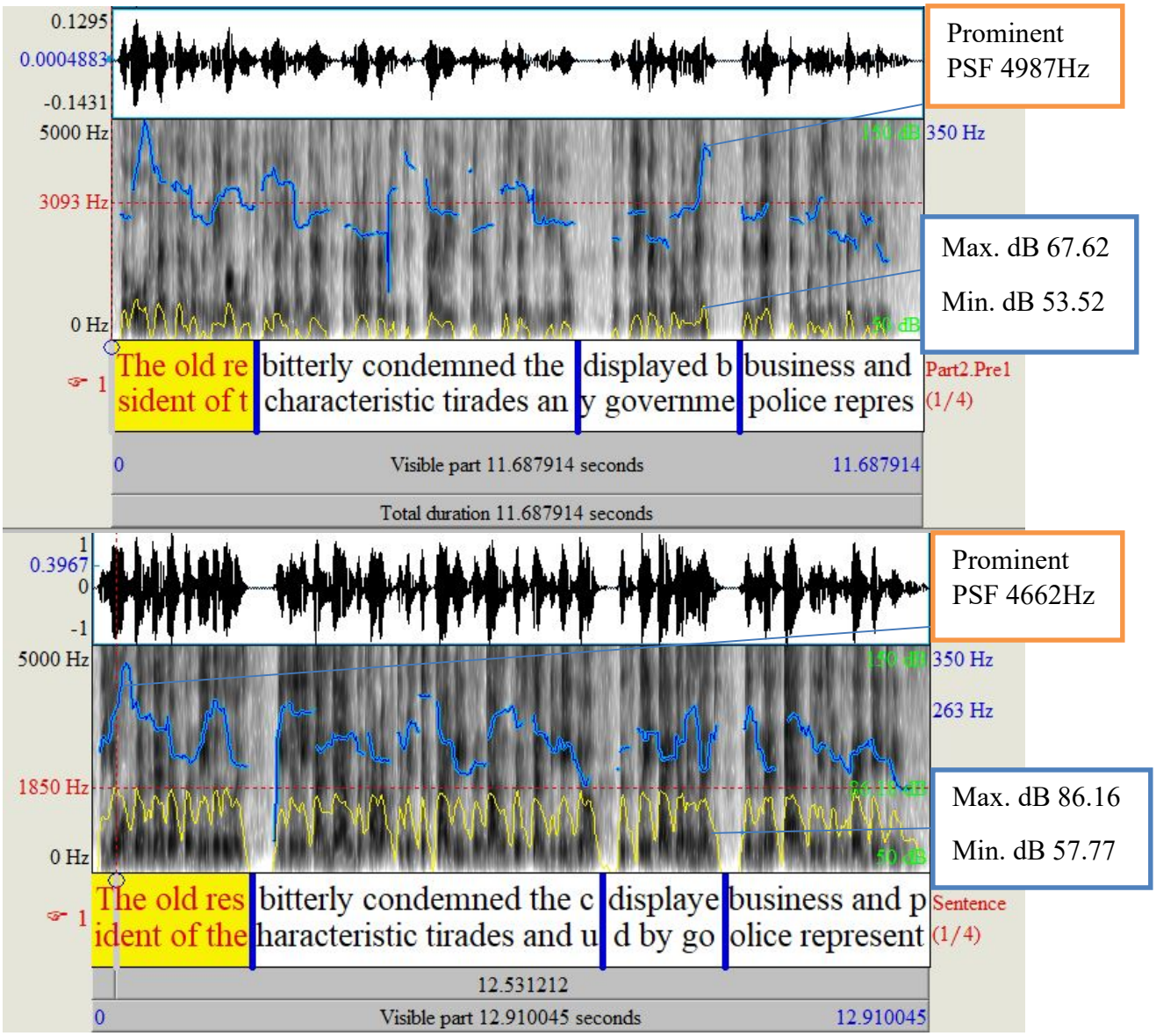


Figure 4.4.1dfrequency and intensity spectrogram of sentence 1 for participant 2 pre and post recording

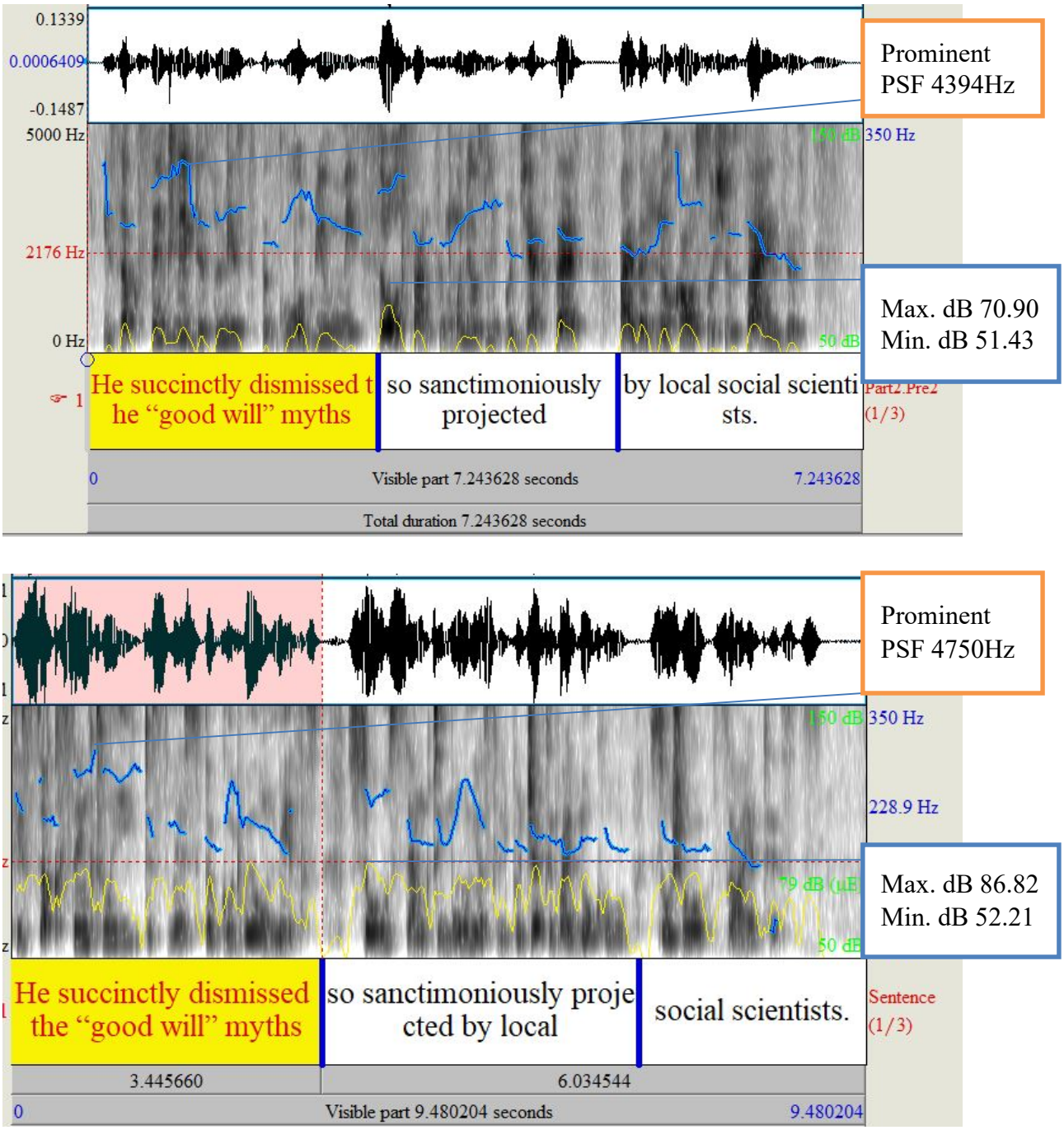


Figure 4.4.2a frequency and intensity spectrogram of sentence 2 for participant 2 pre and post recording

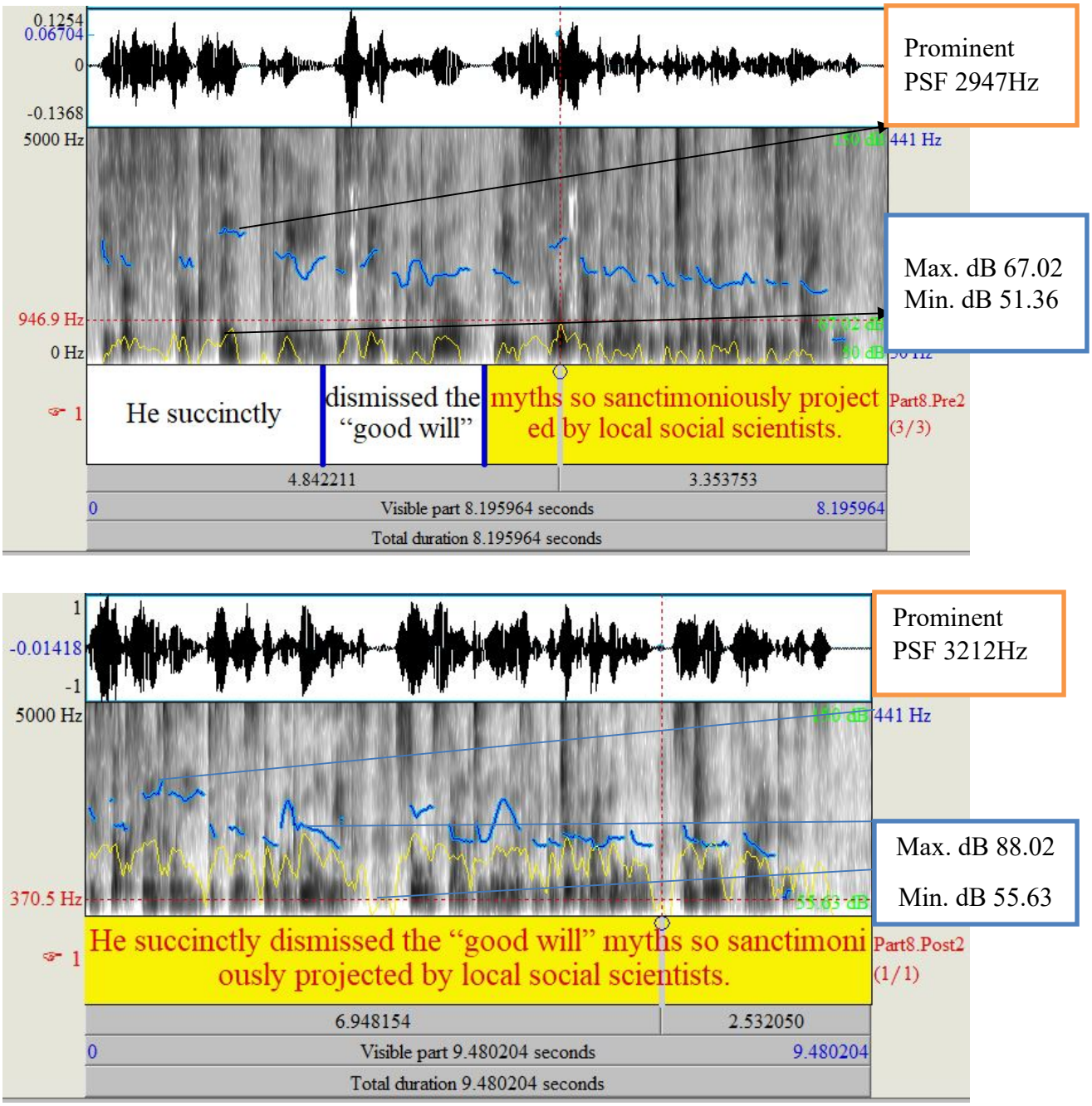


Figure 4.4.2b frequency and intensity spectrogram of sentence 2 for participant 8 pre and post recording

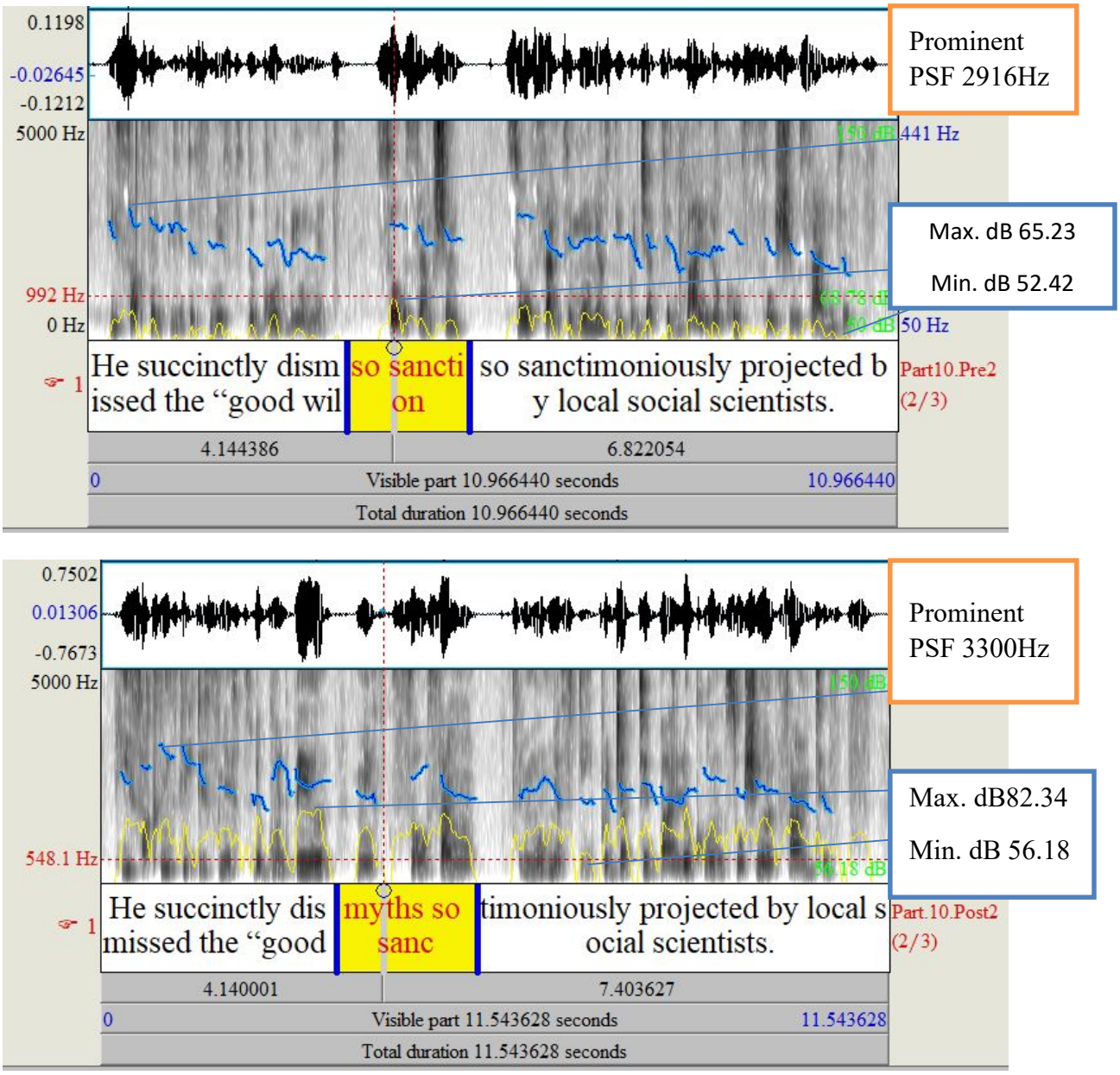


Figure 4.4.2c frequency and intensity spectrogram of sentence 2 for participant 10 pre and post recording

4.4.3 Sentence 3: "The effects of the holocaust throughout the city's precincts are overwhelming;"

Best resultsin sentence 3 were observed in renditions by participants #2, #9, #4, #8, #7 and #6 who recorded differences of -11.32dB, -9.38dB, -7.98dB and -5.44dB respectively in minimum intensity between pretest and posttest but significant records were achieved by participants #2, #9, #4 and #8. Poor results in sentence 3 were observed among participants #3 and #5 who recorded differences of 10.98dB and 3.42dB respectively in minimum intensity between pretest and posttest. Spectrogram display below show the improvement of participants #2, #9, #4 and #8.

4.4.4 Sentence 4: "The destruction includes the length and breadth of the shopping districts."

Best results in sentence 4 were observed in renditions as regarding duration in reading. It is observed that LKT invites a trainee to taste and sense sounds as the travel individually to words and sentences. It is experienced as an unnatural manner of speaking but effective in the long run. To this, best duration as observed by participants #1, #7, #10, #4 and #2 who recorded awareness in articulation of 4.56ms, 3.20ms, 3.15ms, 98ms and 95ms, respectively between pretest and posttest with outstanding performances made by participants #1, #7, and #10. Poor results in sentence 4 were observed among participants #9, #8 and #3 who recorded differences of 26ms, 23ms, and 23ms respectively between pretest and posttest. The spectrogram display of participants with improvement are show in those of #1, #7, and #10.

4.4.5 Sentence 5: "The indignant urban population is as tense as a tightened fiddle string; nine-tenths of them would rather live in pup tents..."

Best results in sentence 5 were observed in renditions by participants #1, #5, #3, #9, #8, and #2 who recorded differences at pretest and posttest scores of 5.71ms, 3.85ms, 2.91ms, 1.75ms, 1.59ms and 1.10ms respectively in duration. Poor results in sentence 5 were observed among participant #4 who recorded decrease differences of -1.35ms in duration between pretest and posttest. The last spectral display of the distinctive sentences was clearly observed in participants' #1 #5, #3, #9, #8 and #2.

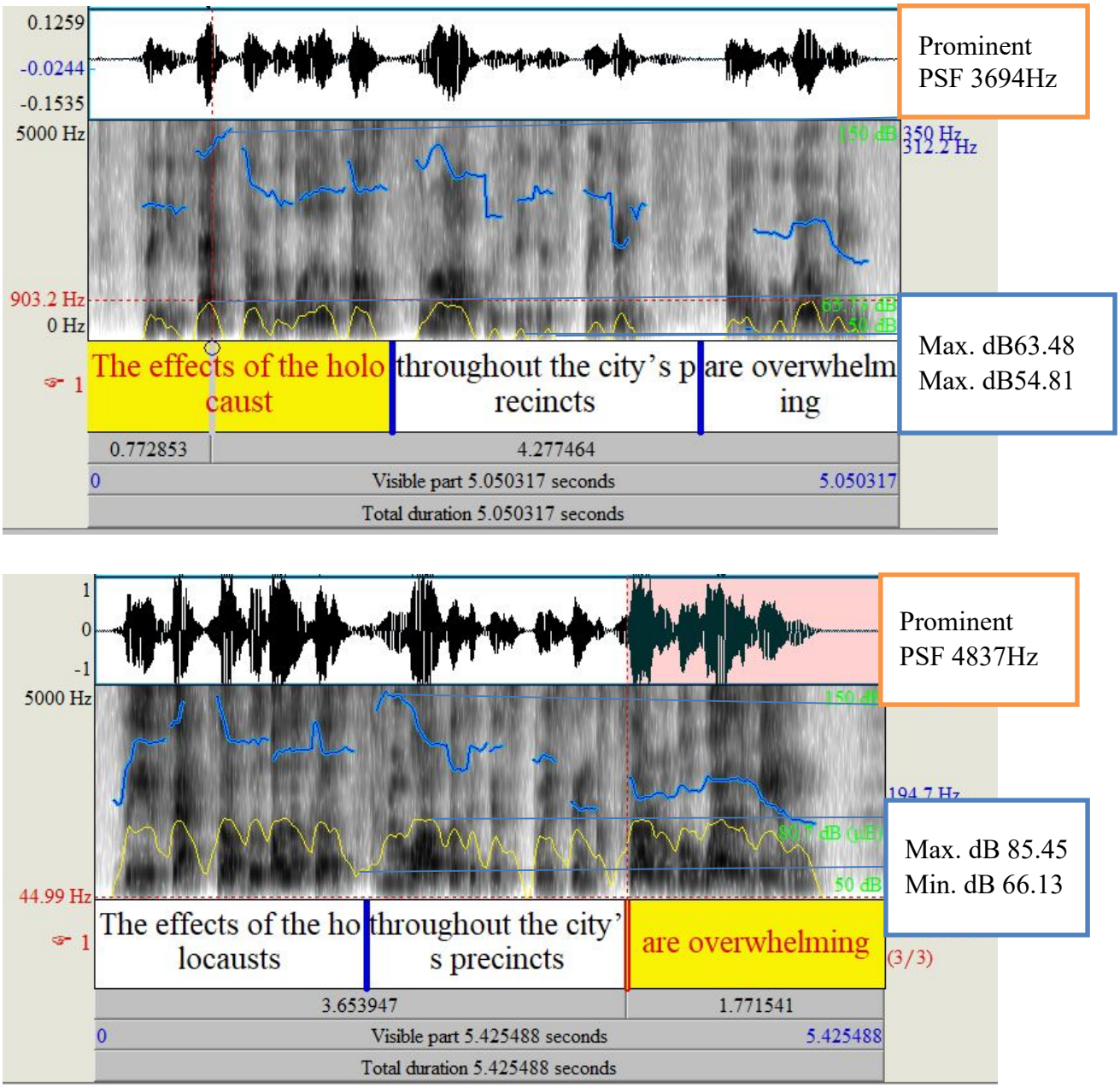


Figure 4.4.3a frequency and intensity spectrogram of sentence 3 for participant 2 pre and post recording

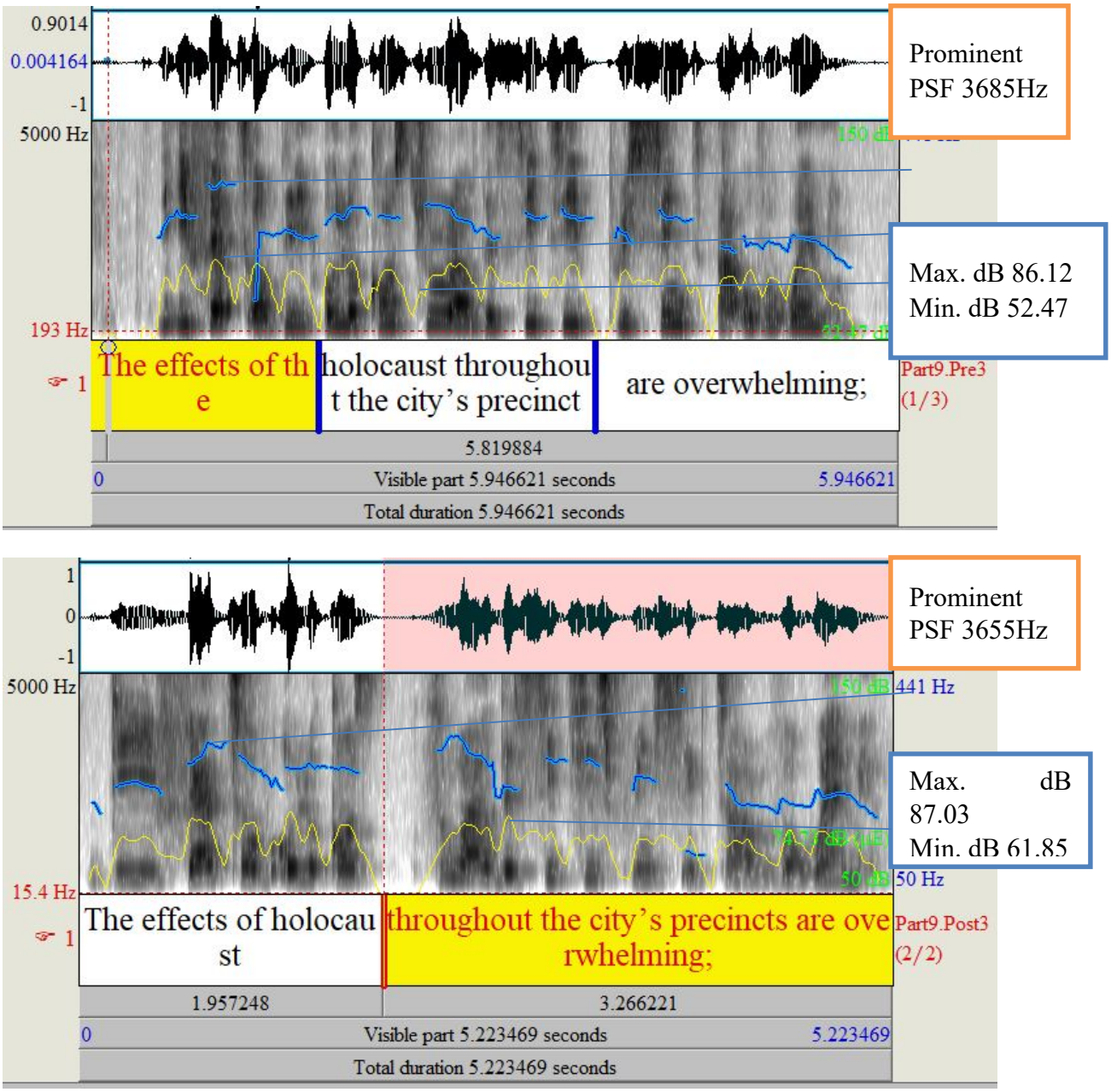


Figure 4.4.3b frequency and intensity spectrogram of sentence 3 for participant 9 pre and post recording

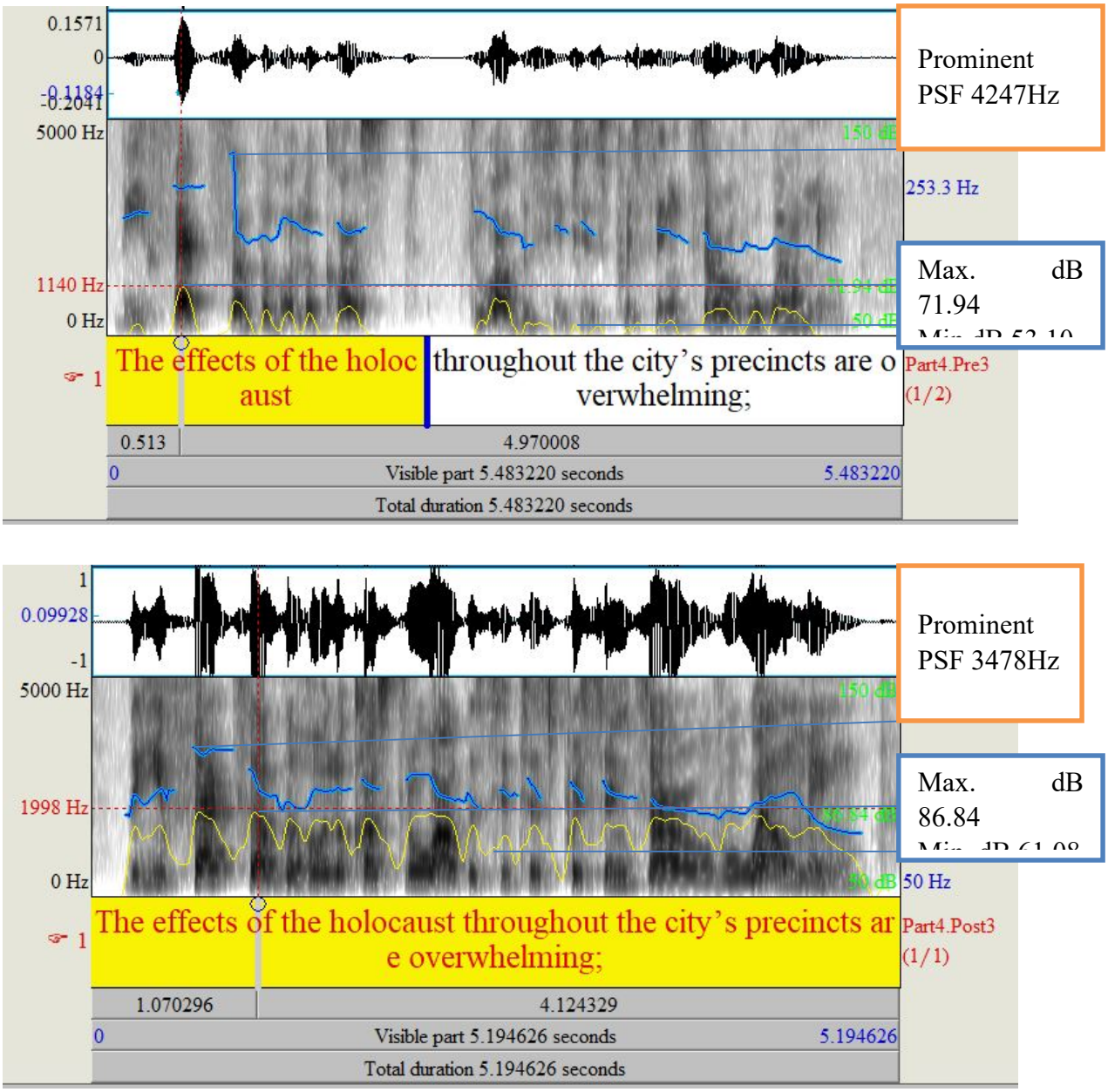


Figure 4.4.3cfrequency and intensity spectrogram of sentence 3 for participant 4 pre and post recording

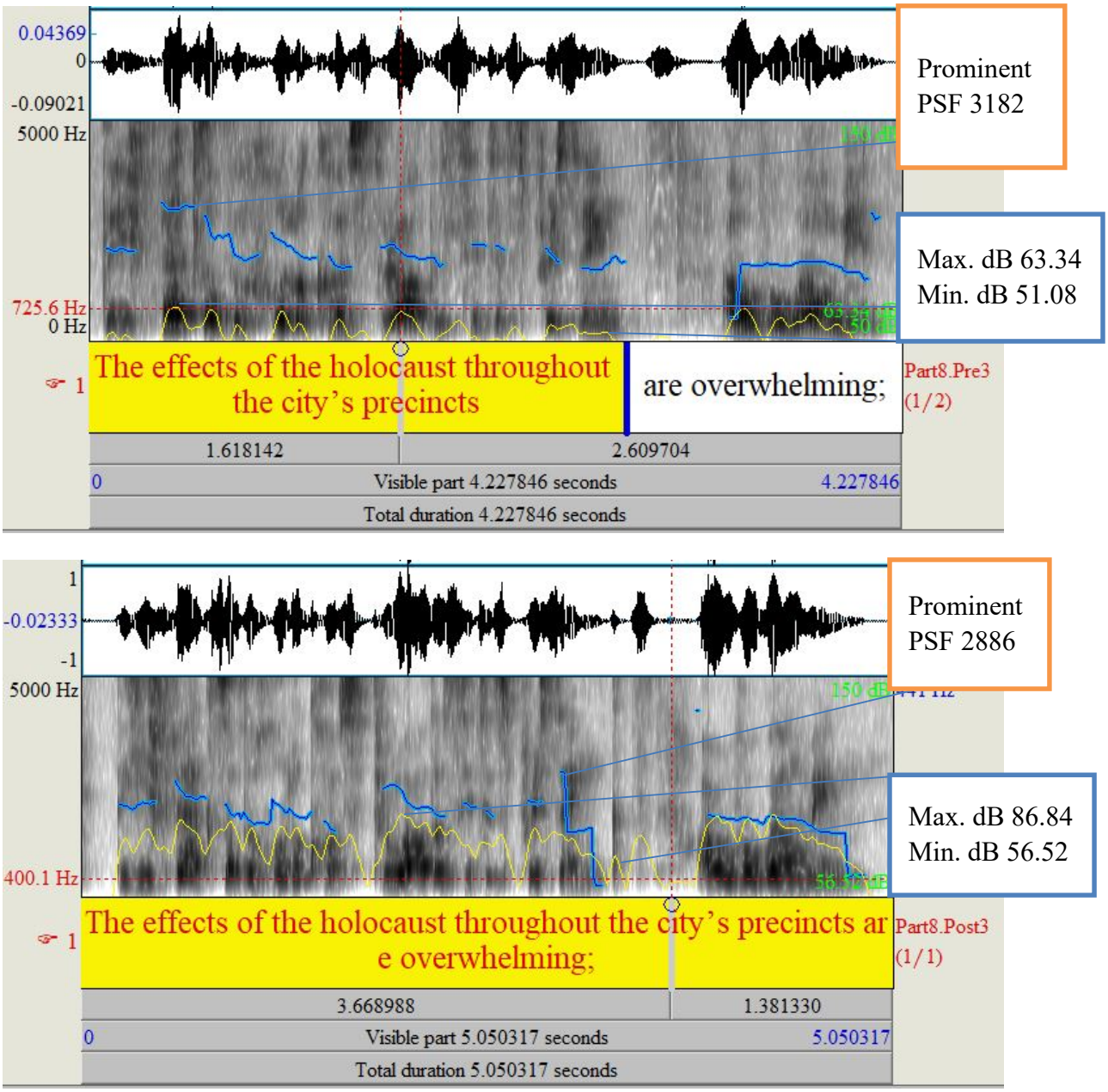


Figure 4.4.3d frequency and intensity spectrogram of sentence 3 for participant 8 pre and post recording

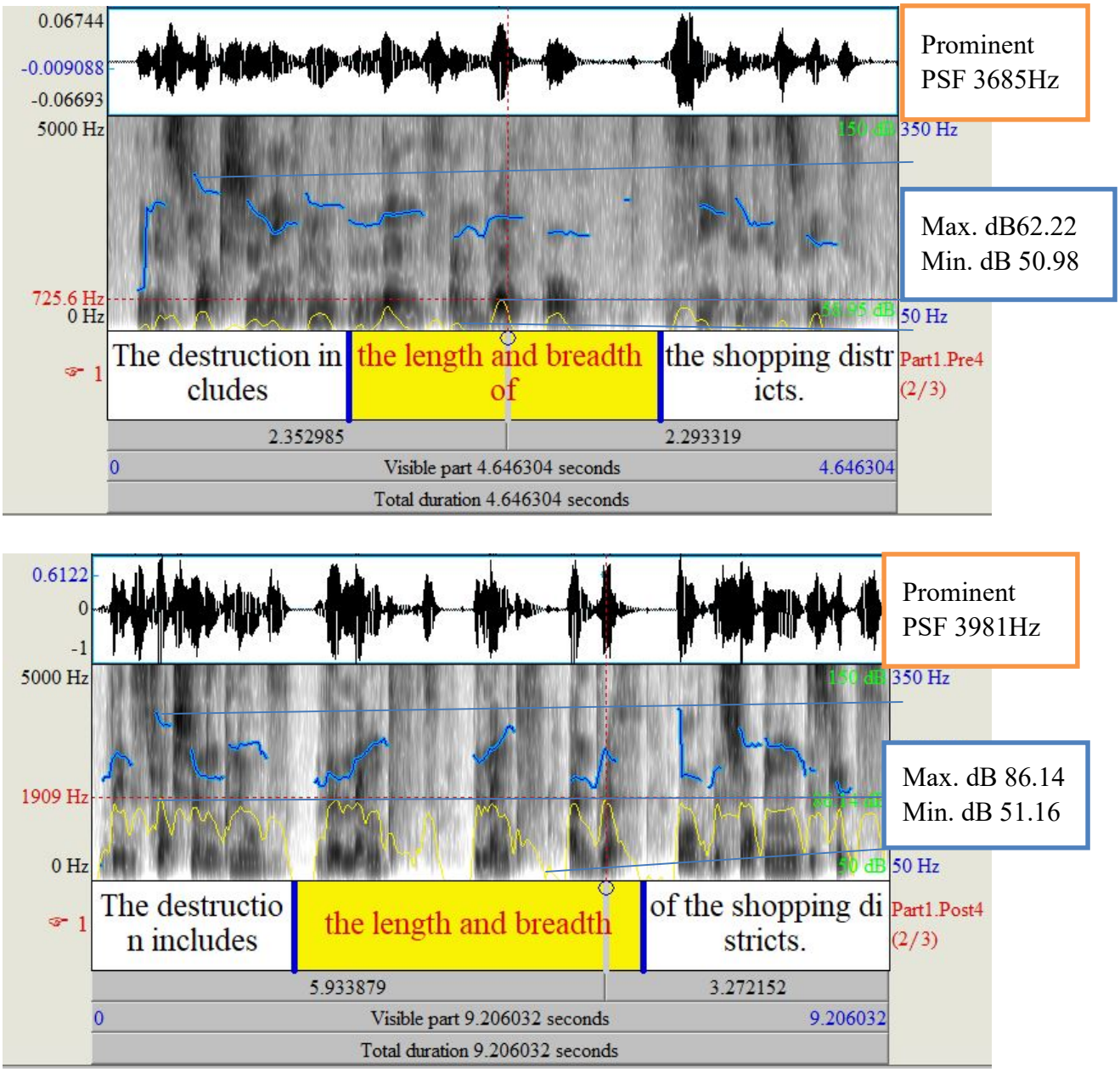


Figure 4.4.4a frequency and intensity spectrogram of sentence 4 for participant 1 pre and post recording

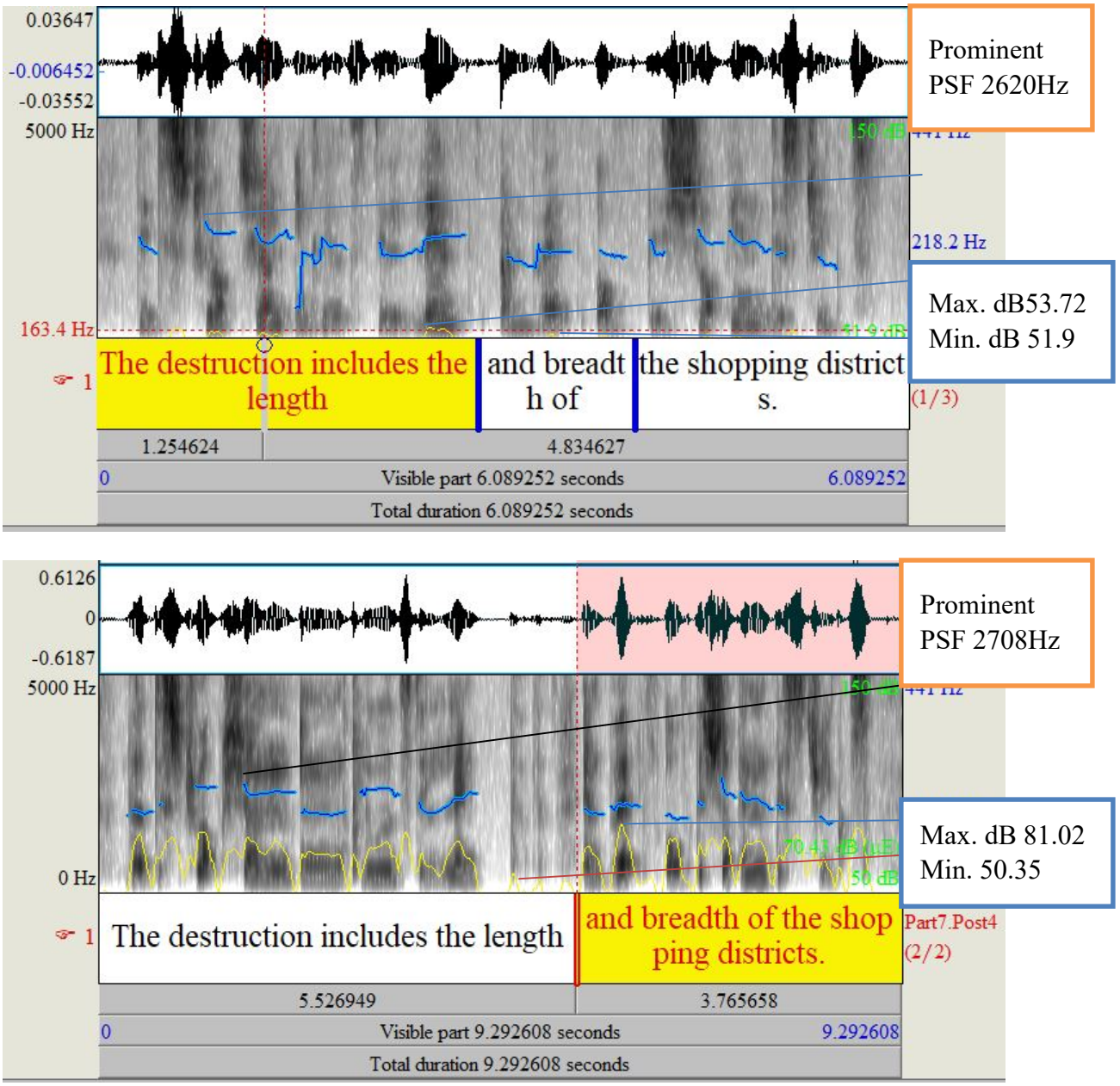


Figure 4.4.4b frequency and intensity spectrogram of sentence 4 for participant 7 pre and post recording

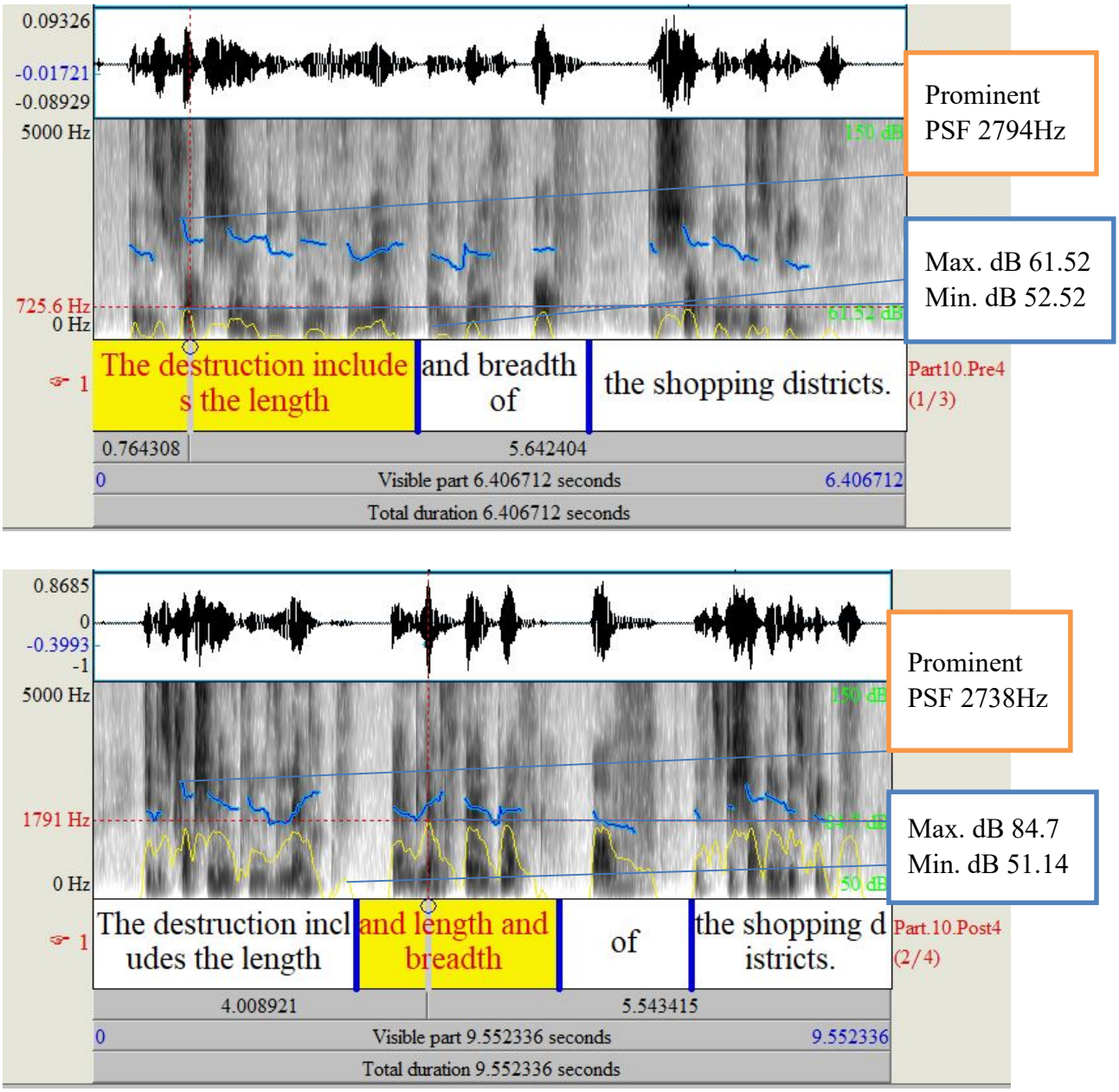


Figure 4.4.4c frequency and intensity spectrogram of sentence 4 for participant 10 pre and post recording

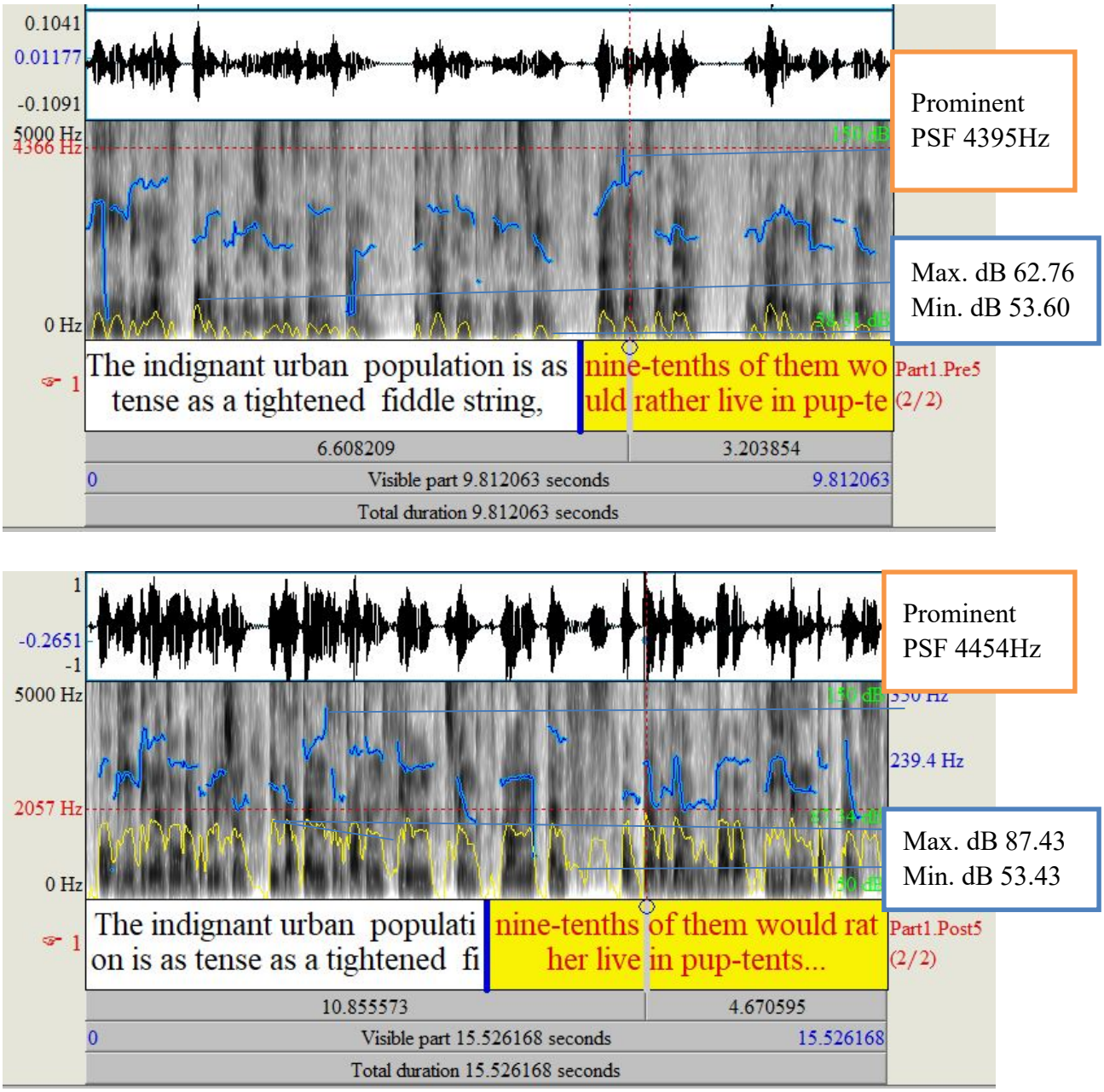


Figure 4.4.5a frequency and intensity spectrogram of sentence 4 for participant 1 pre and post recording

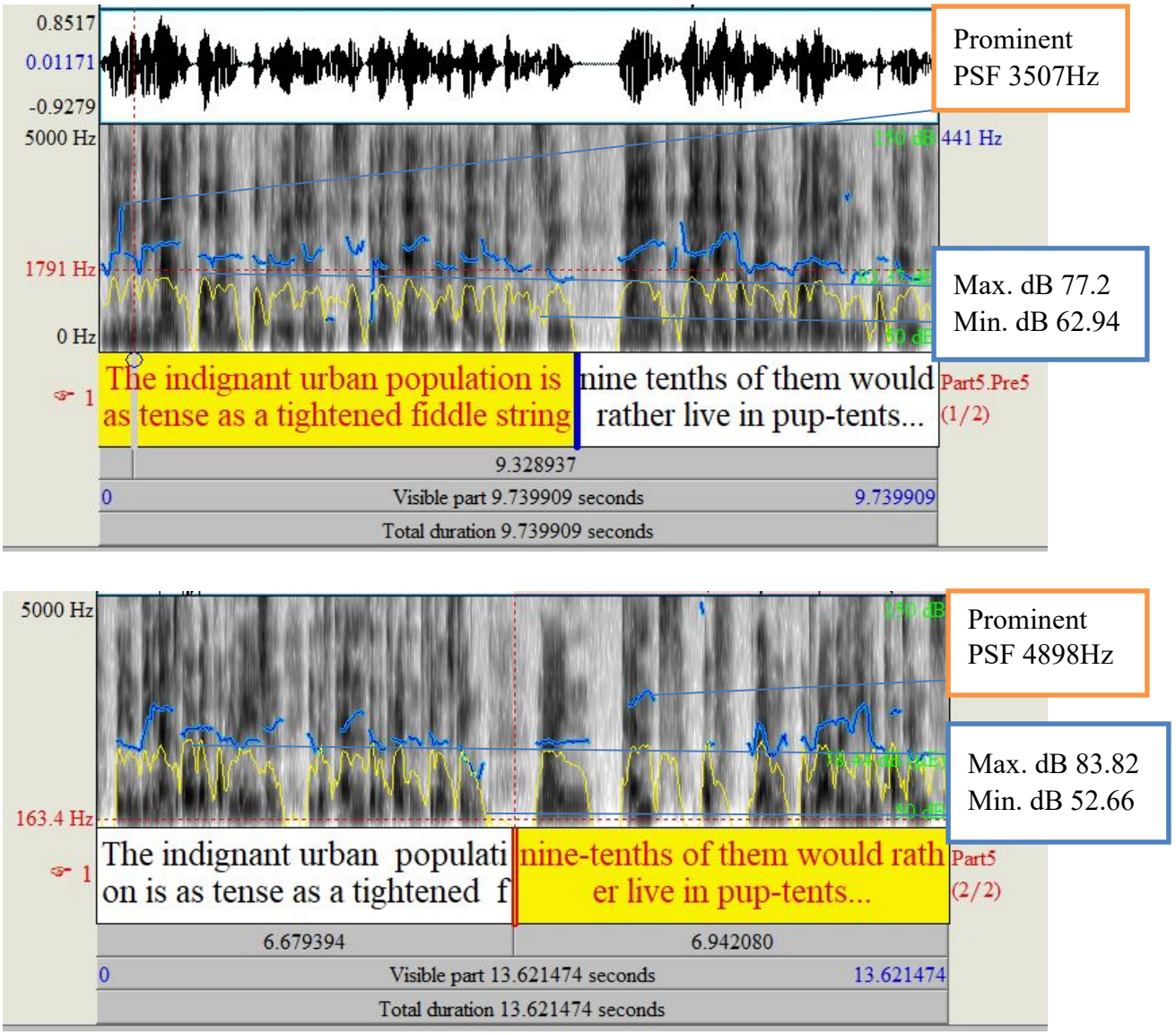


Figure 4.4.5b frequency and intensity spectrogram of sentence 5 for participant 5 pre and post recording

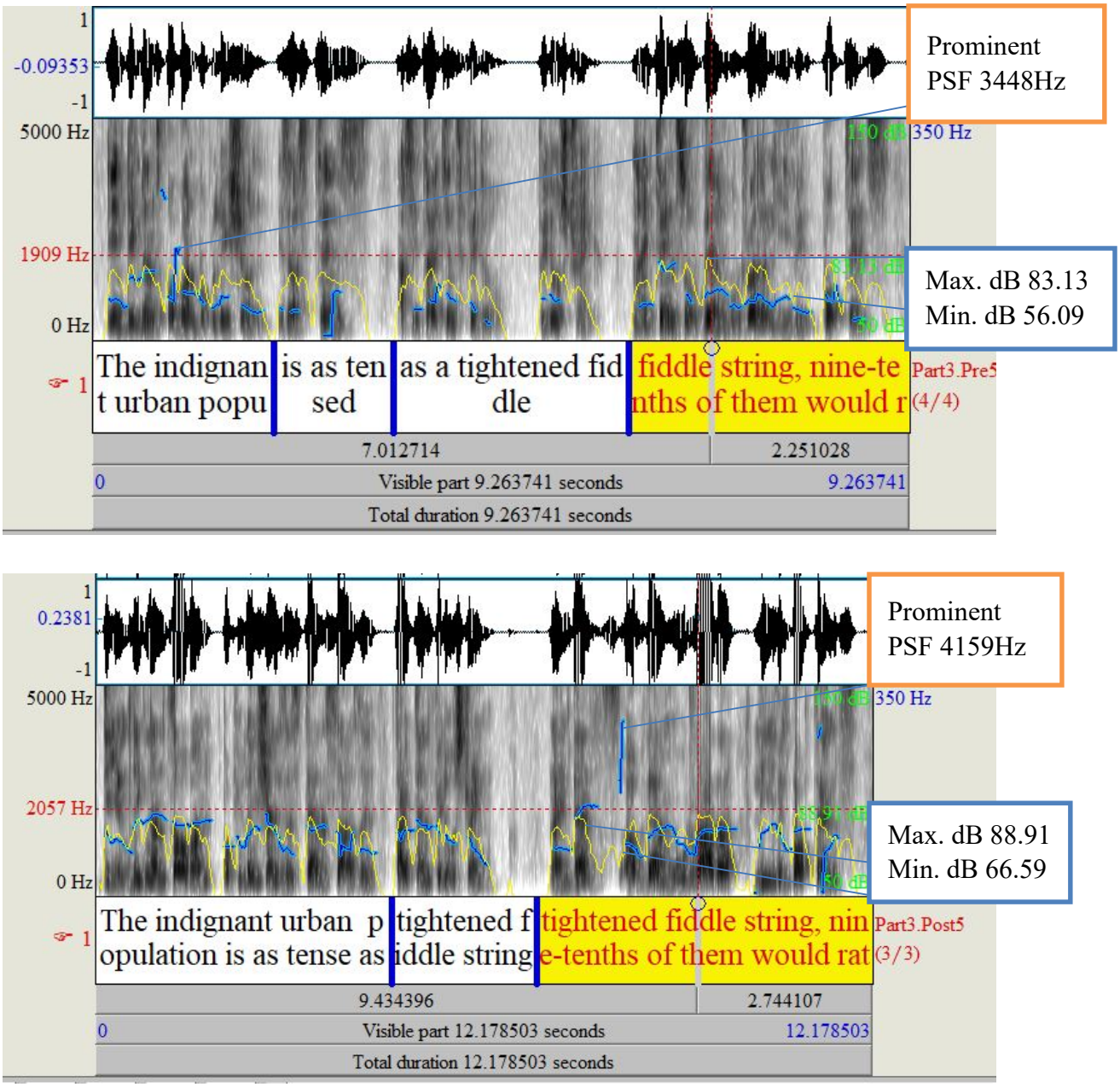


Figure 4.4.5c frequency and intensity spectrogram of sentence 5 for participant 3 pre and post recording

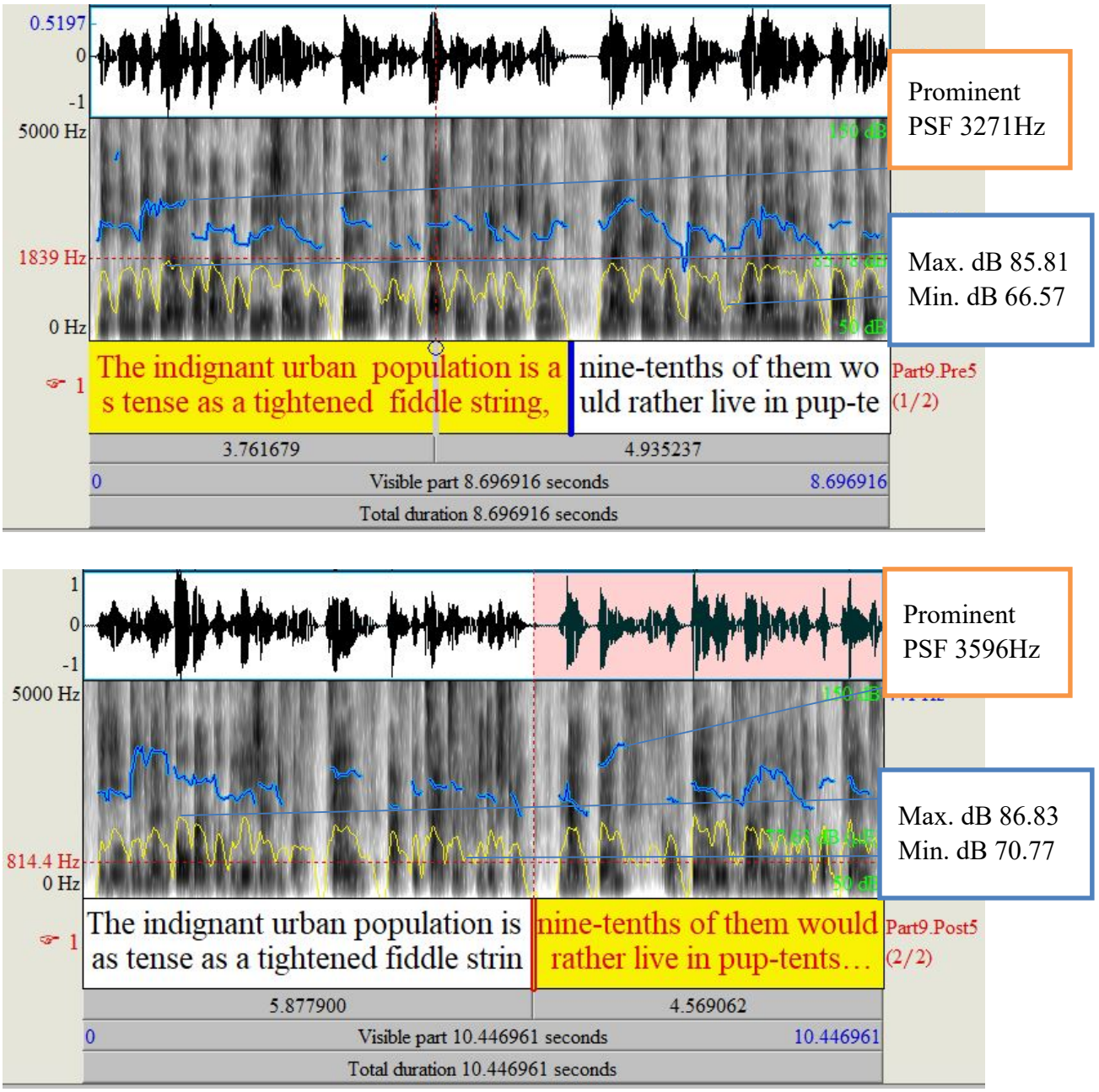


Figure 4.4.5d frequency and intensity spectrogram of sentence 5 for participant 9 pre and post recording

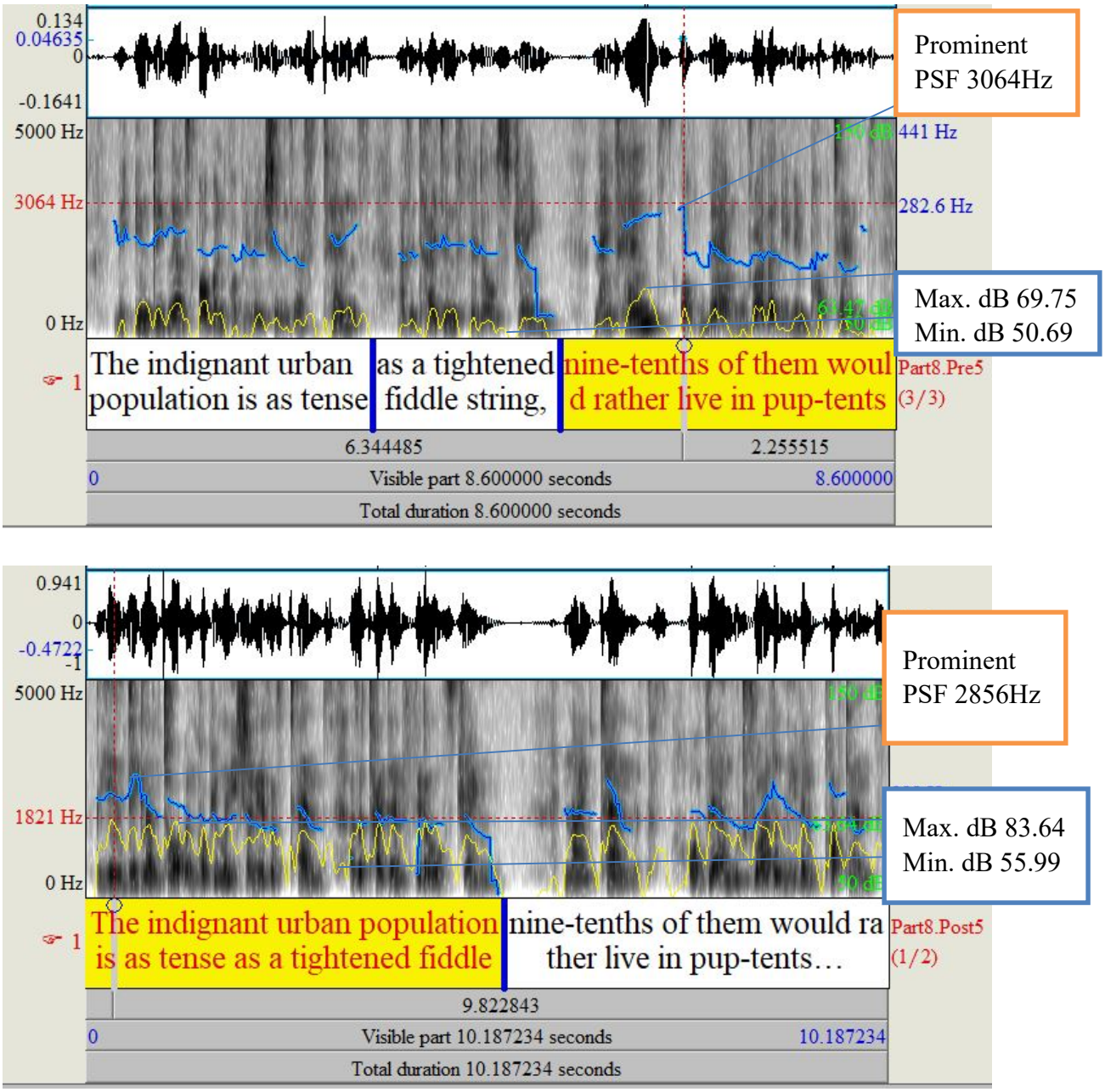


Figure 4.4.5e frequency and intensity spectrogram of sentence 5 for participant 8 pre and post recording

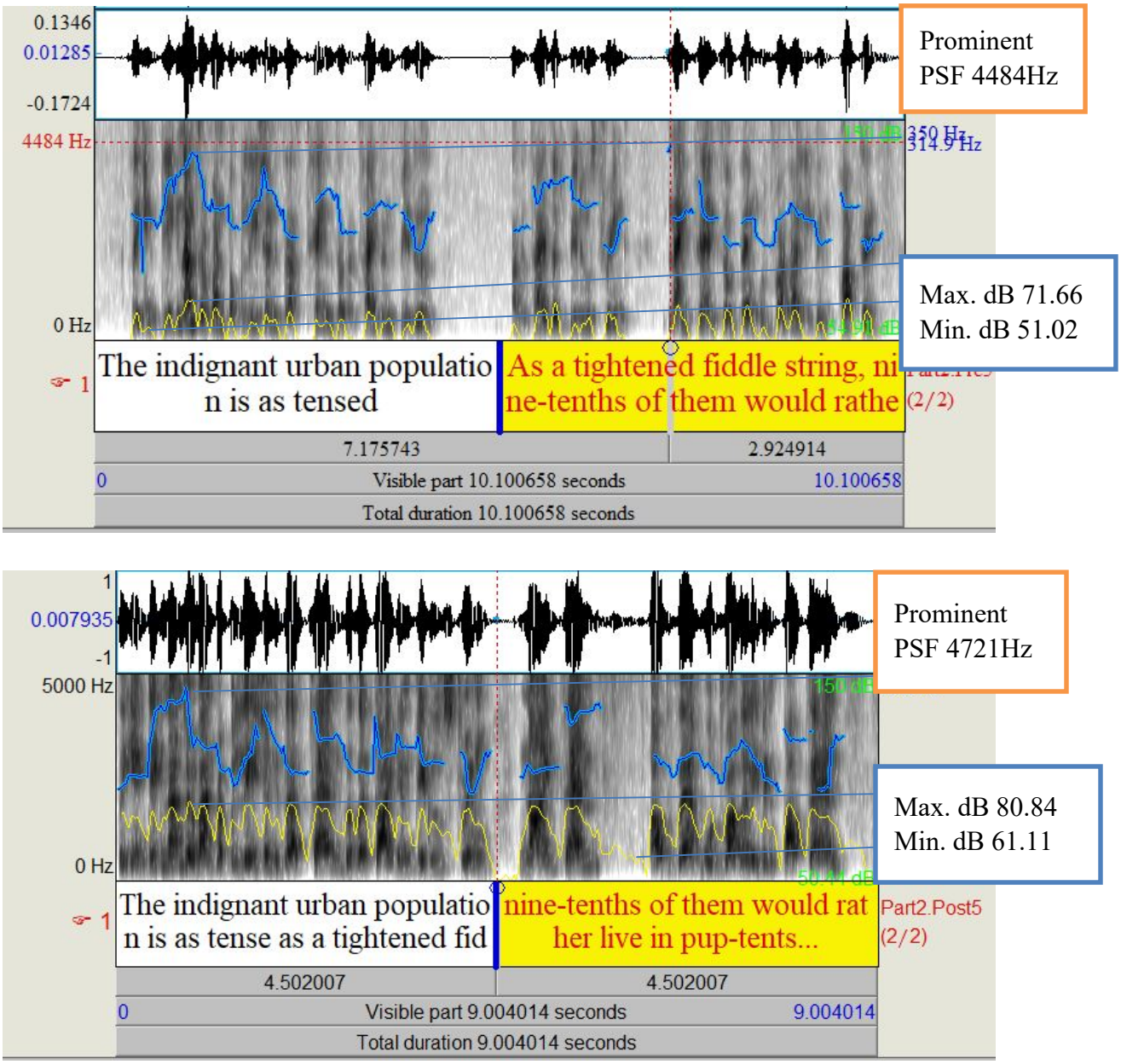


Figure 4.4.5f frequency and intensity spectrogram of sentence 5 for participant 2 pre and post recording

4.5 Differences in Maximum Intensity (dB) Levels for Each Participant across Sentences at Pretest and Posttest

Results from Figure 4.5 shows the differences in maximum intensity (dB) levels for each participant across the five sentences. Results show that specific participants improved at different renditions with significant improvements. Some participants made no improvements as there seemed to be little positive impact of the training on the participants.

4.5.1 Differences in Sentence Duration (millisecond) for Each Participant across Sentences at Pretest and Posttest

According to Lessac Kinesensic Training, during vocal and body explorations, the rendition of any form of literature for performance is usually slow and unnatural. Therefore, affecting the duration and speed of the individual/actor. This is as a result of the individual/actor's attempt to tasting, sensing and feeling in an awareness process, the individual sounds as the link to words, to sentences and into the whole piece being interpreted to the audience of listeners. Duration during this study was significant. The participants, at posttest recording spent more time in their various renditions as displayed in figure 4.5.1.

4.5.2 Differences in Prominent Peaks in Sentence 1 at Pretest and Posttest across Participants

Results from Figure 4.5.2 show the differences in prominent peaks in sentence one at pretest and posttest. Results show that four of the speakers (#3, #4, #8, and #10) showed significant improvements in prominent peaks at posttest while the other participants had a decline in prominent peaks at posttest. The most significant improvement of prominent peaks in Sentence 1 was exhibited by participant 3 (with a difference of -2900 Hz).

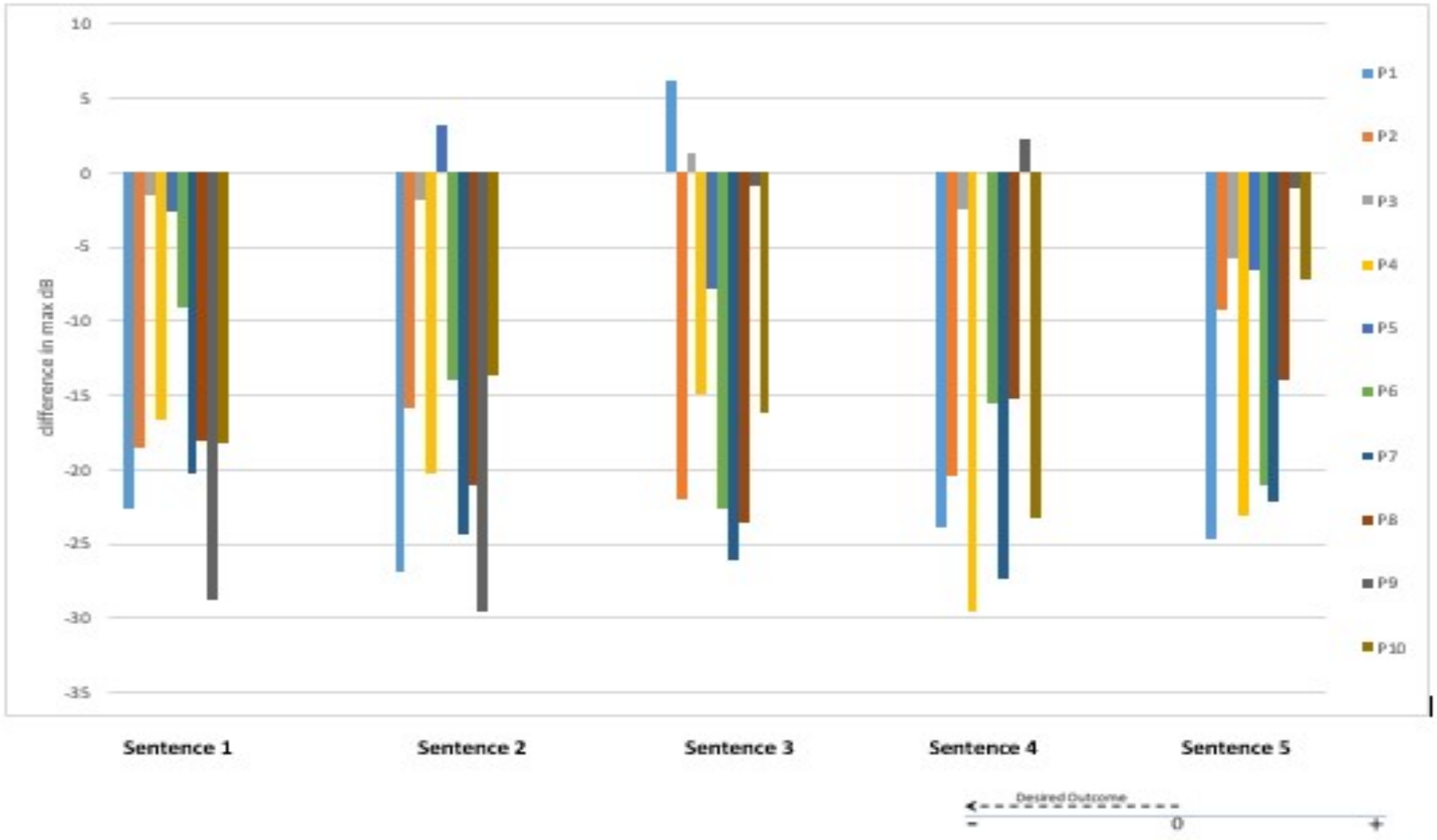
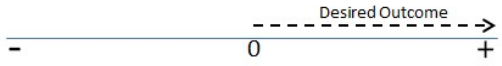


Figure 4.5: Differences in maximum intensity (dB) levels for each participant across sentences at pretest and posttest

Table 4.5.1: Differences in Sentence Duration (millisecond) for Each Participant across Sentences at Pretest and Posttest

Participant	1	2	3	4	5	6	7	8	9	10
Sentence 1	5.60	1.76	5.63	0.57	6.23	2.02	7.36	2.45	2.23	2.91
Sentence 2	6.12	2.24	-0.31	1.61	1.82	3.46	1.79	1.28	0.10	0.58
Sentence 3	0.43	0.37	1.29	0.28	0.58	1.78	1.80	0.82	0.72	1.67
Sentence 4	4.56	0.95	0.23	0.98	0.41	0.53	3.20	0.23	0.26	3.14
Sentence 5	5.71	1.09	2.85	-1.35	3.86	0.66	0.69	1.59	1.75	0.43



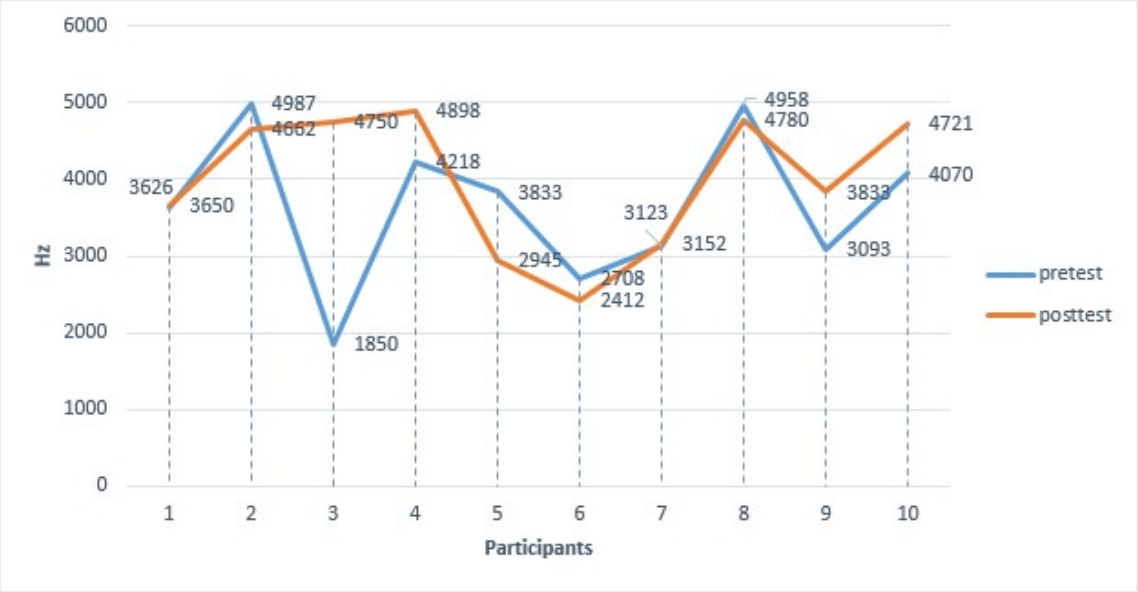


Figure 4.5.2: Differences in prominent peaks in Sentence 1 at pretest and posttest across participants

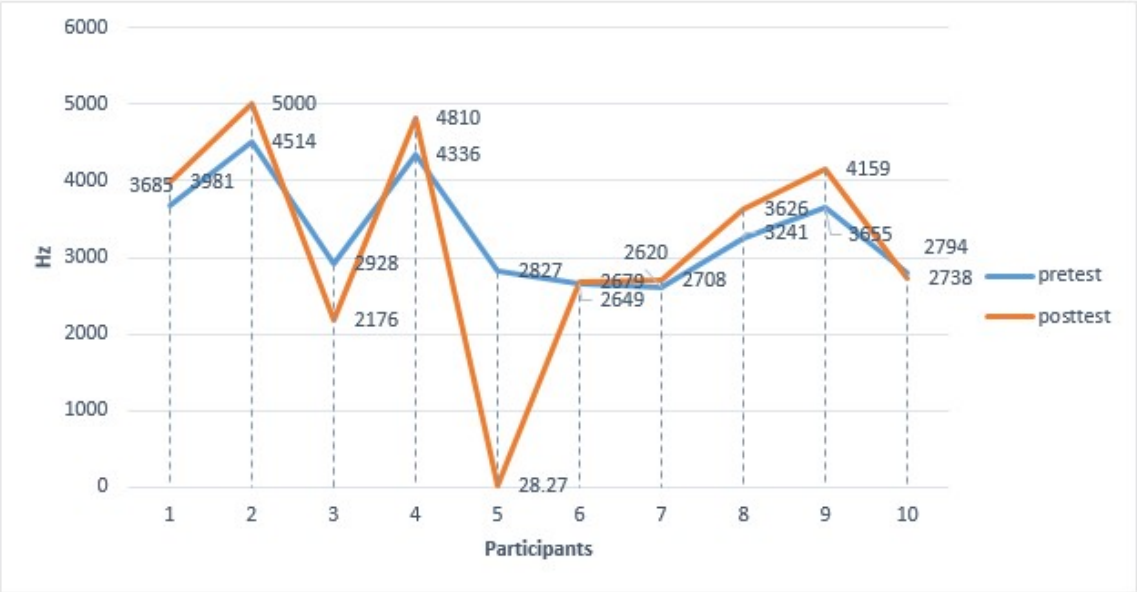


Figure 4.5.3 Differences in Prominent Peaks in Sentence 2 at Pretest and Posttest across Participants

4.5.3 Differences in Prominent Peaks in Sentence 2 at Pretest and Posttest across Participants

Results from Figure 4.5.3 show the differences in prominent peaks in 'sentence 2' at pretest and posttest among the selected speakers. Results show that five of the participants #9, #1, #3, #5 and #10, #2, #8, and #7 showed significant improvements in prominent peaks at posttest while participants #4 and #6 had a decline in prominent peaks at posttest. The most significant improvement of prominent peaks in 'Sentence 2' was exhibited by speaker #9 with a difference of 1184Hz.

4.5.4 Differences in Prominent Peaks in Sentence 3 at Pretest and Posttest across Participants

Results from Figure 4.5.4 show the differences in prominent peaks in 'sentence 3' at pretest and posttest among the selected participants. Results reveal that two of the participants (#2 and #5) showed significant improvements in prominent peaks at posttest while the other participants had a decline in prominent peaks at posttest. The most significant improvement of prominent peaks in 'Sentence 3' was exhibited by speaker #2 with a difference of 1145Hz.

4.5.5 Differences in Prominent Peaks in Sentence 4 at Pretest and Posttest across Participants

Results from Figure 4.5.5 show the differences in prominent peaks in 'sentence 4' at pretest and posttest among the selected participants. Results show that four of the participants (#9, #2, #4, #8, #1, #7 and #6) showed significant improvements in prominent peaks at posttest while the participants had a decline in prominent peaks at posttest. The most significant improvement of prominent peaks in 'Sentence 4' was exhibited by speaker #9 (with a difference of 504Hz).

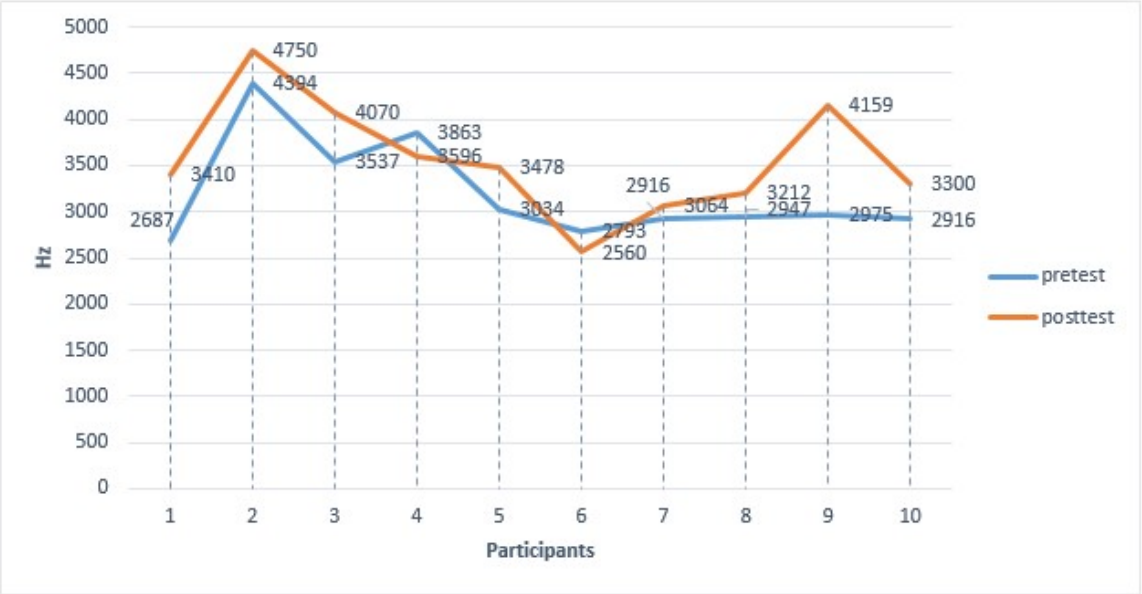


Figure 4.5.4: Differences in Prominent Peaks in Sentence 3 at Pretest and Posttest across Participants

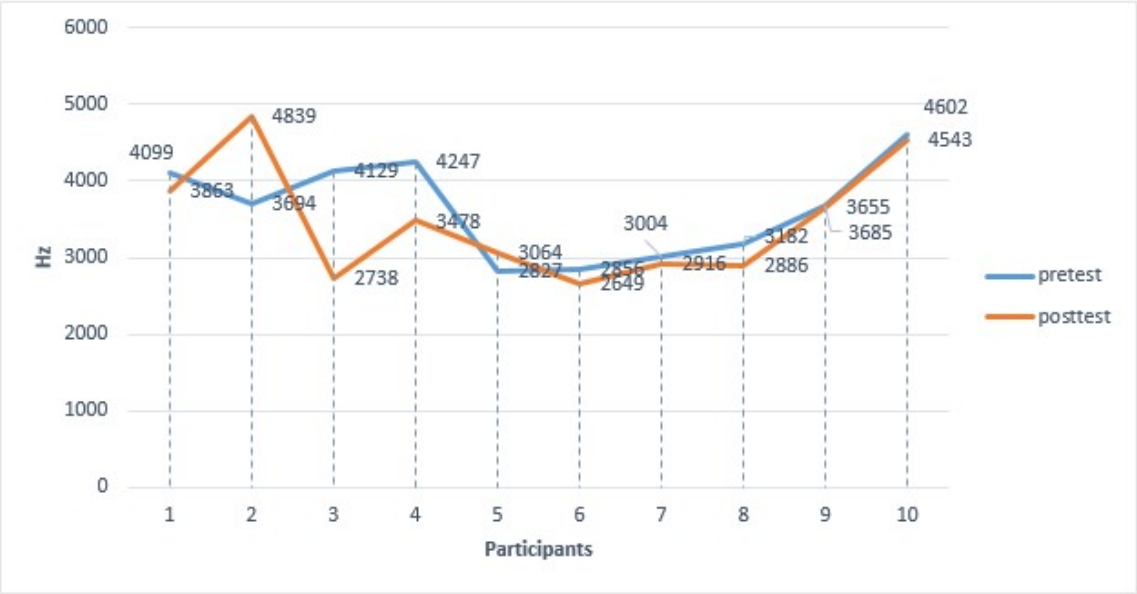


Figure 4.5.5: Differences in prominent peaks in Sentence 4 at pretest and posttest across participants

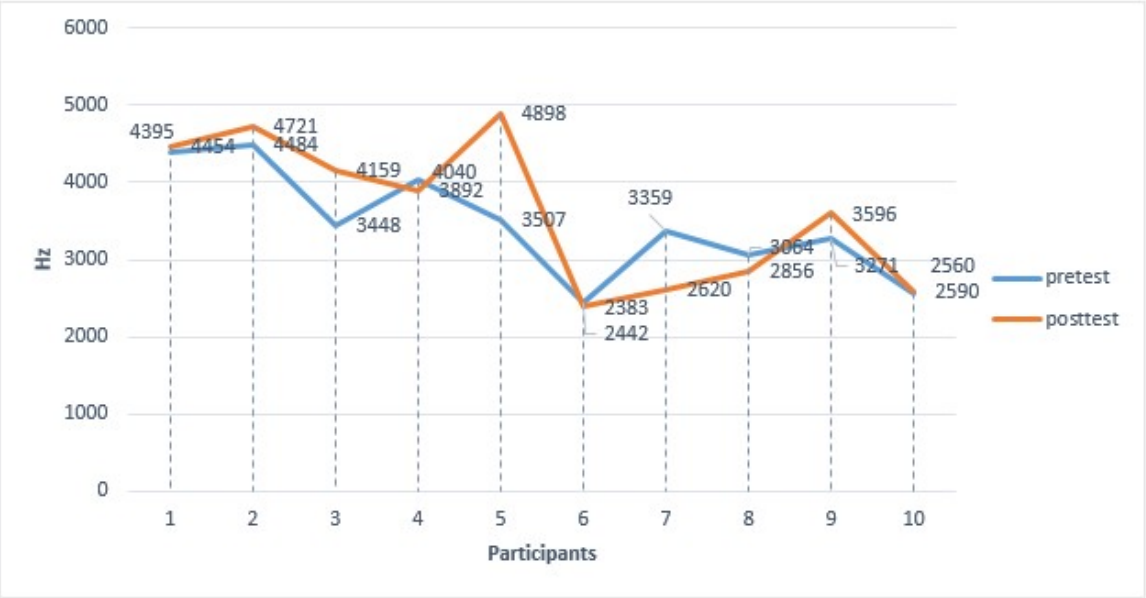


Figure 4.5.6: Differences in Prominent Peaks in Sentence 5 at Pretest and Posttest across Participants

4.5.6 Differences in prominent peaks in Sentence 5 at pretest and posttest across participants

Results from Figure 4.5.6 show the differences in prominent peaks in 'sentence 5' at pretest and posttest among the selected participants. Results show that five of the participants (#5, #3, #9, #2, #1 and #10) showed significant improvements in prominent peaks at posttest while the other participants had a decline in prominent peaks at posttest. The most significant improvement of prominent peaks in 'Sentence 5' was exhibited by participants #2 and #5 (with a difference of 1391Hz).

4.6 Perceptual Analysis

The fourth part featured volunteered participants as judges that comprised of nine trained speech undergraduate and graduate students in the Department of Theatre Arts and Linguistics and African Languages both of the University of Ibadan, Ibadan. The judges were to have no hearing defect, or biases about the speakers at the time of the study. The researcher distributed to the judges the Informed consent forms in accordance with the Social Sciences and Humanities Research Ethics Committee (SSHEC) University of Ibadan.

The Linguistics Laboratory at the Faculty of Arts, University of Ibadan was where the judges jointly heard the entire speech recordings during both stages (pre-training and post-training). Ozaki speaker model: OM955 QDID: 8018966 aided the listening pleasure of the judges. At some point, they requested to use Havit model: headphones for clarification of distinct sounds heard from the recordings which were set at a consistent level for all samples. The assessments were collected and analysed using SFS/ESection Version 2.2 (2007-01-01) (c) 2007 Mark Huckvale University College London http://www.phon.ucl.ac.uk/resource/sfs. The assessment allowed the judges to do a comparative judgement between each recording and across the speakers and the four types of renditions. The essence was to discover who were most intelligible among the speakers and mainly speakers who had higher assessment for "sustention of end consonants in syllables". The study also did a comparative analysis of all the rendition styles that were

recorded for all the undergraduate actors, but assessed as “Normal articulation”, “Over-articulation”, “Poor articulation” and “Sustention of end consonants in syllables”.

The judges were informed through the assessment form on the different speech conditions/renditions as mood of the text may have affected the delivery of the sentences and phrases of each condition. The rendition presentation was divided into four sections: “The Old Resident” and Dramatic excerpt were read, while Monologue and First language were memorised. The judges were first asked to listen to pre training recording, then, take a break, afterward, they listened to the recorded samples multiple times before arriving at the conclusions. The next section asked judges to listen to the post training recording multiple times, and then, make their assessments, and then, determine which had better articulation from both recordings. The intelligibility which was the final section of the assessment, the judges were instructed to select which speaker was best at both phases.

Projection was also considered by the judges to determine the audibility without shouting to the microphone during recording. Projection (Michel and Willis, 1983) is described as the degree to which a voice is evident and flows naturally and mercilessly.One main goal of the actor’s voice is through project to be able to get across to any audience (Turner, 1993). Judges also had the choice to rate both stage as equivalent if they thought that each participant’s recordings had the same concentrations for ordinary articulation, bad articulation, over-articulation and end consonant susceptibility for syllables. Judges were advised to react to their view and subsequently to, collectively as general observations at the end of the exercise. Judges listened to both sound recordings for each segment (with the choice of listening several times), made a separate and comparative assessment and went on to the next section.

The final part that brought the perceptual study to a close was to investigate the judgement of the judges in all renditions and to bring the task to a close in order to gather their general observations which were the following: that the speakers exhibited consciousness, carefulness, increased awareness, duration/lengthened their vowels, articulated their consonants distinctly and sometimes gave inflections and intonations to their speeches all at the post recording sessions.

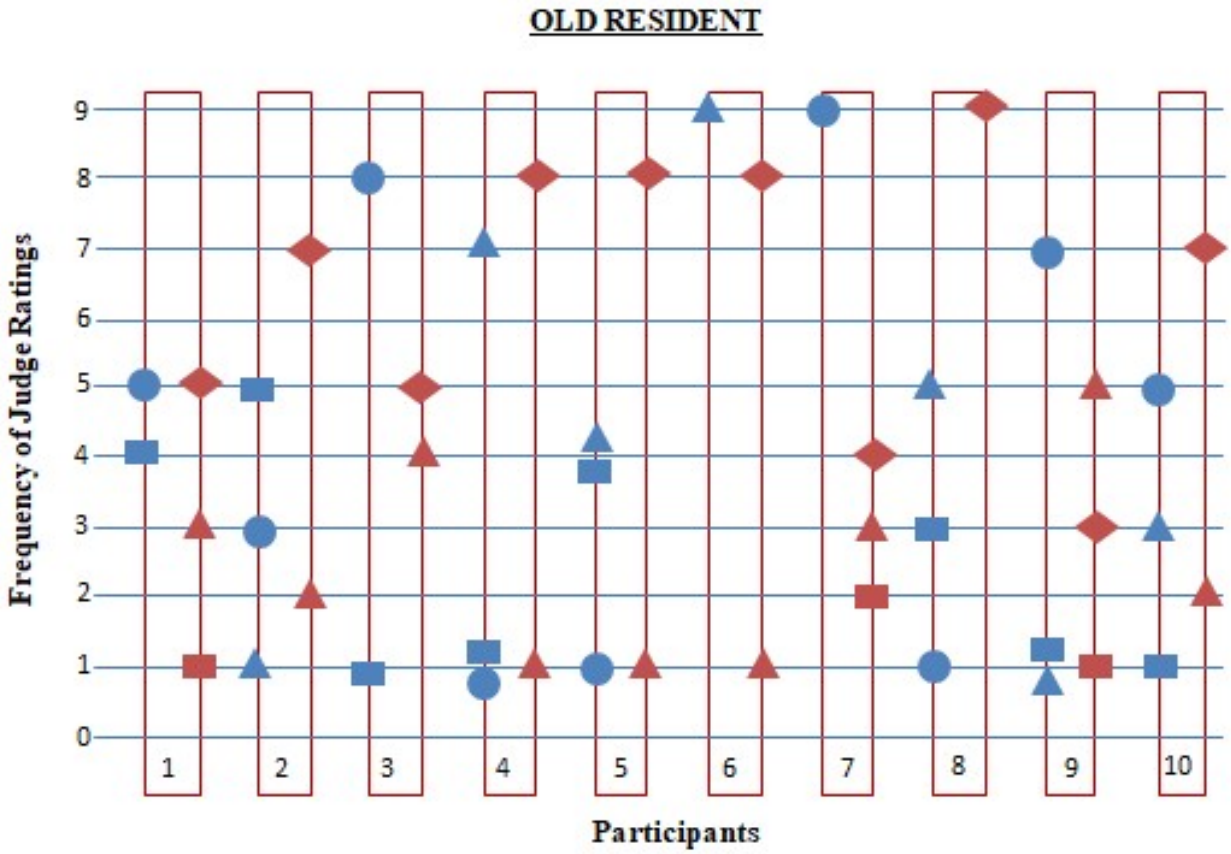
4.6.1 Findings Showing Judges' Ratings of Most Perceived Condition at Pretest and Posttest across Five Distinct Sentences from "The Old Resident" Consonant Selection

Figure 4.6.1 shows that none of the 10 participants exhibited sustention of end consonants in syllables at pre-test levels while only 3 of the participants received ratings of normal articulation by more than half (55.5%) of the judges at pretest. However, 7 of the participants received ratings of attaining sustention of end consonants in syllables by more than half (55.5%) of the judges at posttest. The general trend of result in table 4.6.1 shows that the treatment was effective in developing sustention of end consonants in syllables for old resident renditions.

Some individual standout results were observed. For instance, participant #2 who was rated as having over articulation by 55.5% of the judges at pretest, eventually attained sustention of end consonants in syllables at posttest as rated by 77.7% of the judges. Similarly, participant #8 achieved unanimous ratings of exhibiting sustention of end consonants in syllables at posttest as rated by all of the judges. Participant #7, who initially was rated by all the judges as having poor articulation at pretest, eventually received ratings of normal articulation (by 33.3% of the judges) and sustention of end consonants in syllables (by 44.4% of the judges).

4.6.1.1Differences in Minimum and Maximum Intensities and Articulation Duration for Each Participant across Memorised Monologue at Pretest and Posttest

The result on Table 4.6.2 is an obvious fact that the training was significant to the reading of "The Old Resident". Also there was improvement in the monologue delivered by the participants. Their intensities was rated higher. For their articulation, there was evident that they was much awareness and the psychophysical technique had a huge impact on their tasting, sensing and duration. They also did not have to memorise what was in process but an obvious fact is that they organically made their rendition in a playful and purposeful manner.



CONDITIONS	Pre-test	Post-test
Normal Articulation	▲	▲
Over Articulation	■	■
Poor Articulation	●	●
Sustention of End Consonants in Syllables	◆	◆

Figure 4.6.1 Findings showing judges' ratings of most perceived condition at pretest and posttest across five distinct sentences from Old Resident Consonant Selection

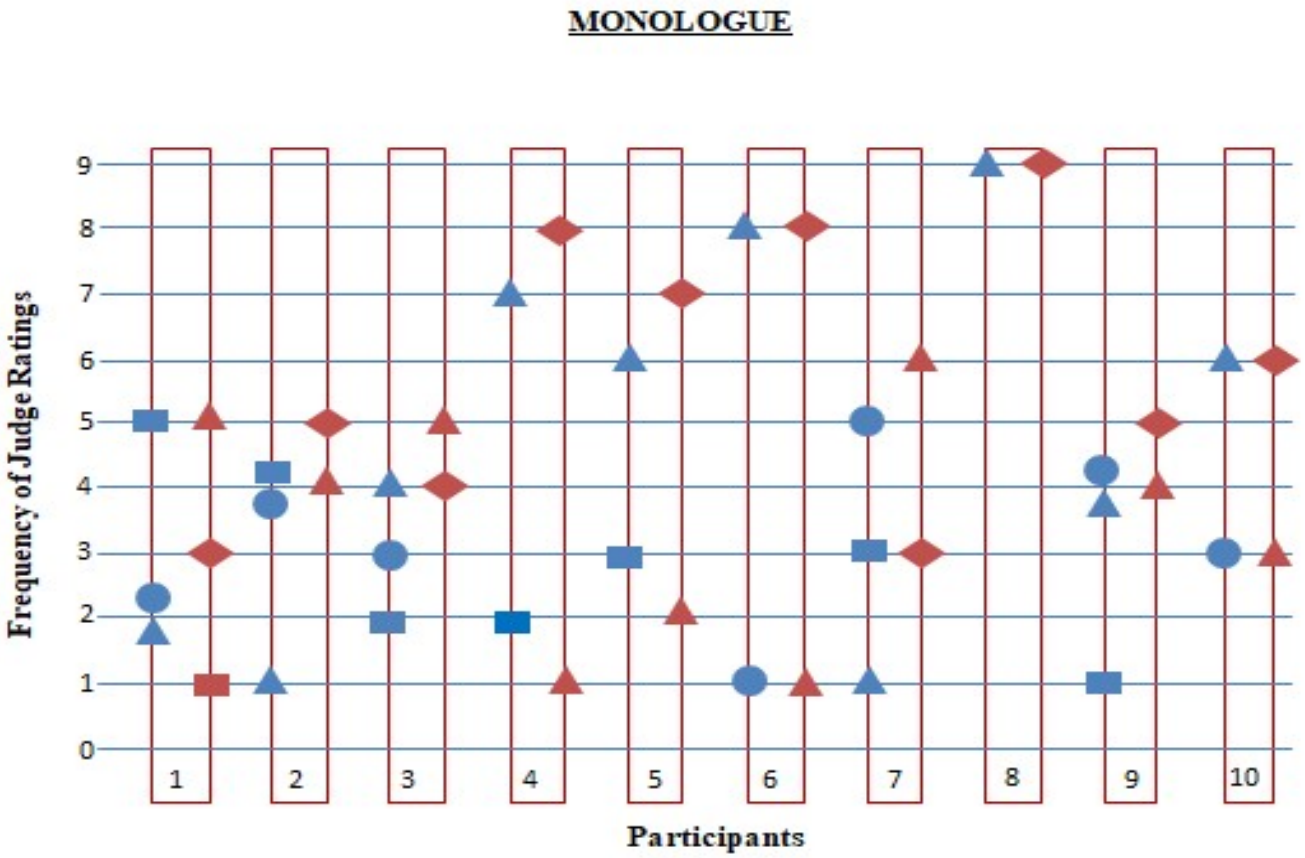
4.6.2 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across Memorised Monologue Renditions

Figure 4.6.2 shows that none of the 10 participants exhibited sustention of end consonants in syllables at pre-test levels while only 5 of the participants received ratings of normal articulation by more than half (55.5%) of the judges at pretest. However, 7 of the participants received ratings of attaining sustention of end consonants in syllables by more than half (55.5%) of the judges at posttest. This significant difference lays credence to the potency of the treatment received in developing sustention of end consonants in syllables for monologue renditions.

Some individual standout results were observed. For instance, participant #1 who was rated as having poor articulation (by 22.2% of the judges) and over articulation (by 55.5% of the judges) at pretest,, eventually attained sustention of end consonants in syllables (as rated by 33.3% of the judges) and normal articulation (as rated by 55.5% of the judges) at posttest. Similarly, participant #8 who was initially rated by all the judges as having normal articulation at pretest later achieved unanimous ratings of exhibiting sustention of end consonants in syllables at posttest as rated by all of the judges. Participant #7, who initially was rated by all the judges as having poor articulation (55.5% of the judges) and over articulation (by 33.3% of the judges) at pretest, eventually received ratings of normal articulation (by 66.6% of the judges) and sustention of end consonants in syllables (by 33.3% of the judges).

4.6.3 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across First Language Rendition

Figure 4.6.4 shows that none of the 10 participants exhibited sustention of end consonants in syllables at pre-test levels while 9 of the participants received ratings of normal articulation by more than half (66.6%) of the judges at pretest. However, only participant #8 received ratings of attaining sustention of end consonants in syllables by all the judges; while participants #7 and #9 also received ratings of attaining sustention of end consonants in syllables by 11.1% of the judges. The general trend of result in figure 3 shows that the treatment was more effective in developing normal articulation than sustention of end consonants in syllables for first language renditions.



CONDITIONS	Pre-test	Post-test
Normal Articulation	▲	▲
Over Articulation	■	■
Poor Articulation	●	●
Sustention of End Consonants in Syllables	◆	◆

Figure 4.6.2 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across Memorised Monologue Renditions

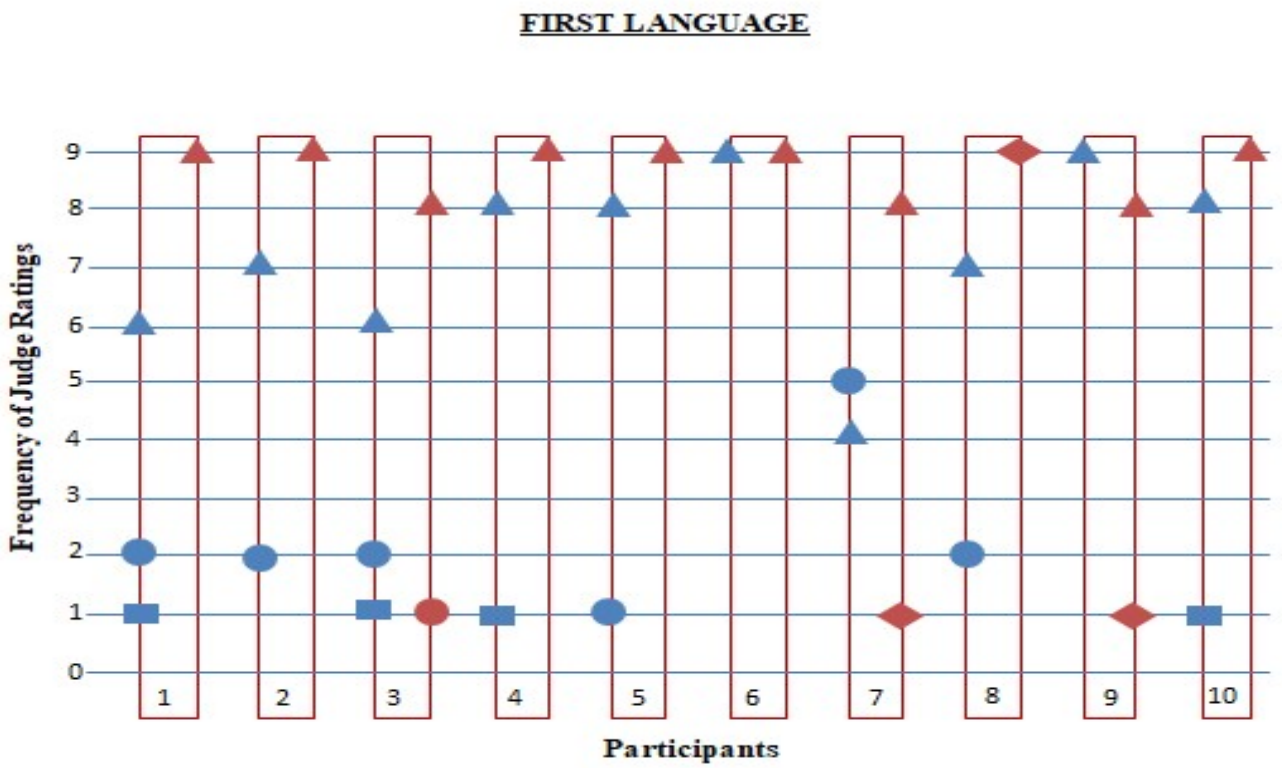
Table 4.6.3 Differences in Minimum and Maximum Intensities and Articulation Duration for Each Participant across Memorised Monologue at Pretest and Posttest

	1	2	3	4	5	6	7	8	9	10
Minimum Intensity (dB)	-10.5	-14	-1.5	-13	3.5	-10	-19.5	-9	0	-7.5
Maximum Intensity (dB)	-7	-12.5	-2	-9.5	0	-10	-10	-5	1.5	-8
Articulation Duration	2.43	-3.25	0.28	0.24	8.25	1.73	5.01	3.45	2.9	1.05

4.6.4 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across Dramatic Reading Renditions

Figure 4.6.5 shows that none of the 10 participants exhibited sustention of end consonants in syllables at pre-test levels while all 10 of the participants received ratings of attaining sustention of end consonants in syllables by more than half (55.5%) of the judges at posttest. These significant differences in pretest and posttest values lay credence to the potency of the treatment received in the development of sustention of end consonants in syllables in dramatic renditions.

Some individual standout results were observed. For instance, participant #8 who was rated as having normal articulation (by 88.8% of the judges) and over articulation (by 11.1% of the judges) at pretest, eventually attained sustention of end consonants in syllables (as rated by all of the judges) at posttest. Similarly, participant #6 who was initially rated by all the judges as having normal articulation at pretest later achieved ratings of exhibiting sustention of end consonants in syllables at posttest as rated by 88.8% of the judges. Participant #7, who initially was rated by all the judges as having poor articulation (33.3% of the judges) and over articulation (by 33.3% of the judges) at pretest, eventually received ratings of normal articulation (by 44.4% of the judges) and sustention of end consonants in syllables (by 55.5% of the judges).



CONDITIONS	Pre-test	Post-test
Normal Articulation	▲	▲
Over Articulation	■	■
Poor Articulation	●	●
Sustention of End Consonants in Syllables	◆	◆

Figure 4.6.3 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across First Language Rendition

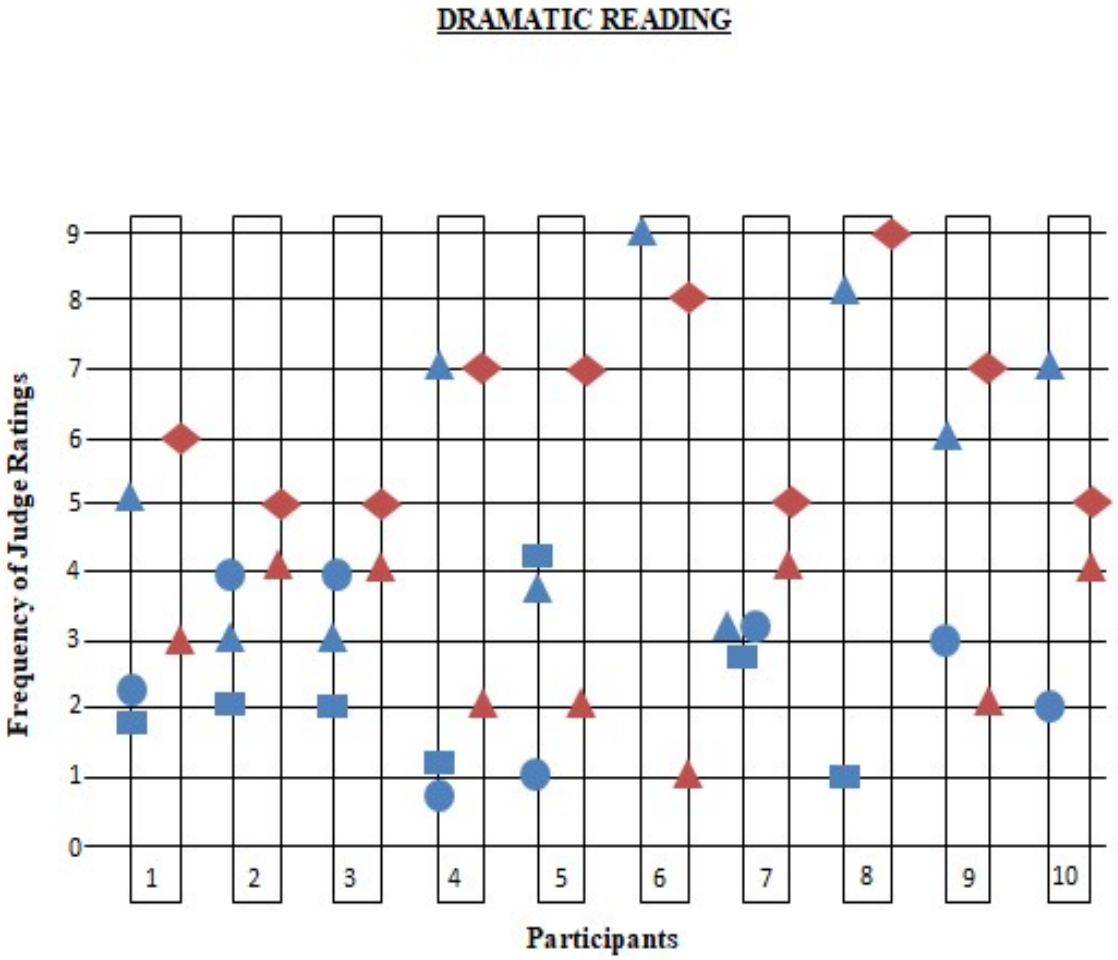
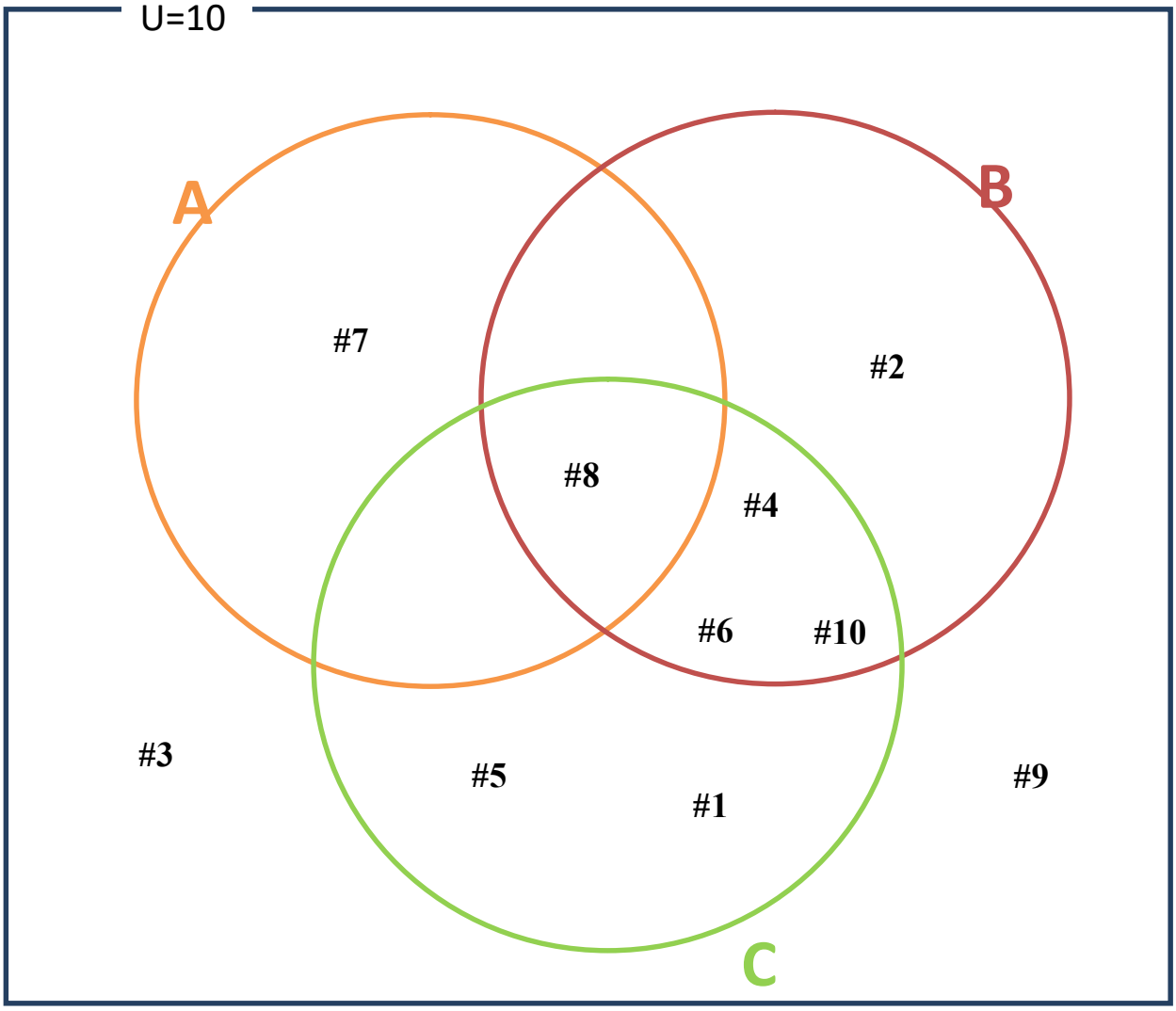


Figure 4.6.4 Findings from Judges' Ratings of Most Perceived Condition at Pretest and Posttest across Dramatic Reading Rendition



A=Perceptual Analysis

B=Acoustic Analysis

C=Survey Analysis

Figure 4.6.5 Comparisons of Treatment Outcomes across Perceptual, Acoustic and Survey Methods of Analyses

4.6.5 Comparisons of Treatment Outcomes across Perceptual, Acoustic and Survey Methods of Analyses

Figure 4.6.6 is a Venn diagram that was used to compare the outcomes of the three methods of analyses used in examining the effect of LKT on vocal expression among 10 undergraduate actors. The undergraduate actors who exhibited best/desired results of the treatment effect in each method of analysis were highlighted. The Venn diagram was then used to highlight over-arching results within each method of analysis. Results showed that participant #8 exhibited desired results of treatment effect across the three methods of analyses. Participants #4, #6 and #10 exhibited desired results of treatment effect across the Acoustic and Survey methods of analyses. Participants #5 and #1 exhibited desired results of treatment effect in Survey method of analysis. Participant #7 exhibited desired results of treatment effect in the Perceptual method of analysis. Participant #2 exhibited desired results of treatment effect in the Acoustic method of analysis. Participants #3 and #9 were the only undergraduate actors that did not exhibit desired results of treatment effect across any of the three methods of analyses.

4.7 Summary of Findings

The following were found out in the study:

1. In comparing the pre and posttest scores of vocal pedagogy used in actor training between the experimental and control groups, it was found that
    a. There was substantial difference in the vocal pedagogy used to create an embodied actor in the participants trained.
    b. There was a positive significant effect on breathing and posture measurements in full upright posture among undergraduate actors.
    c. There was a positive significant effect on breathing and posture measurements in cervical spine among undergraduate actors.
    d. There was a positive significant effect on breathing and posture measurements in spine to coccyx among undergraduate actors.
    e. There was a positive significant effect on breathing and posture measurements with proper chest expansion among undergraduate actors.

f. There was a positive significant effect on weight reduction among undergraduate actors.

2. In relation to the focus of the vocal pedagogy used in actor training before and after the treatment, it was discover that
   a. There was substantial difference in the aspects that the vocal pedagogy in use focused on the undergraduate actors as participants.
   b. There was a positive significant effect on breathing and posture measurements across shoulders among undergraduate actors.
   c. There were substantial positive acoustic differences in minimum and maximum intensities of decibel levels for each participant across sentences at pretest and posttest levels among undergraduate actors.
   d. There were substantial positive effects in prominent peaks for each sentence by participants at pretest and posttest levels among undergraduate actors.
3. In examining the degree to which undergraduate actors memorise the principles of a vocal pedagogy for performance, it was observed that
   a. There were substantial positive effects in duration for each participant across sentences of different renditions at pretest and posttest levels among undergraduate actors.
   b. There was positive effect of comparison in the treatment outcomes – survey, acoustic and perceptual – among undergraduate actors.
4. In comparing the pre and posttest knowledge score of Lessac Kinesensic between the experimental and control groups, it was found that
   a. There was post increase in the experimental group at posttest level among the undergraduate actors.
5. In investigating the main effect of years of actor training, first language and treatment on vocal expression among undergraduate actors, it was found that
   a. There was no substantial significant main effect of years of actor training on vocal expression and intelligibility among the undergraduate actors.
6. In investigating the main effect of years of actor training, first language and treatment on intelligibility among undergraduate actors, it was found that

a. There was no substantial significant main effect of first language on vocal expression and intelligibility among undergraduate actors.
b. There was no substantial significant interaction effect of first language and treatment on vocal expression and intelligibility among undergraduate actors.

4.8 Discussion of Findings

Going by all that the study has observed, investigated, and examined with regard to voice, speech, breath, body and mind training for an expressive, embodied and transformational actor in the university theatre training, it was revealed that geographical location and ethnicity of the undergraduate actors beg for inclusivity and diversity to be taken into consideration as corroborated by Munro and Lemmer (2018) that every language should be embraced and honoured by her speaker regardless of other languages she encounters in performance space. Gender was not proportionately carried out as more females volunteered to be a part of the study. An avenue for further research is how knowledgeable the participants' were on various vocal pedagogies used for creating an embodied actor training. Many of the participants' initial assumption were that training of the actor's diction demanded only the use of a pronunciation dictionary with skilled knowledge of phonetics transcription. The finding in the study about years of experience showed that many of the participants had less than two years of voice and speech training even though they had spent three to four years in the theatre programme.

Another outlook in the study is the role of breath and emotions and the ability to draw on other existing methods/pedagogy in actor training as asserted by Matchett (2019) to create an embodied and expressive actor. Breath has been observed by the participants to be a vital tool for dialogue delivery in relation to how it affects the body posture of the actor in performance space and in everyday situation.

The present study examined whether Lessac Kinesensic is effective in the vocal skills in terms of resonance, pitch, rhythm, loudness and expression in different rendition styles of the undergraduate actor and to what degree the undergraduate actor is intelligible to any given audience. The measures for ANCOVA demonstrated a slight significant difference in the hypotheses. Nevertheless, the acoustics measured through the articulatory

conditions of the undergraduate actors reading prose, dramatic pieces, monologues of choice, showed that first language had positive significant positions at posttest phase. The perceptual rating served as a qualitative and an unerring response to the study by comparing the participants' perception and the acoustics findings.

In the study, for the perceptual findings, the variable for articulatory context (i.e., normal articulation, over-articulation, poor articulation and sustention of end consonants in syllables) provides room for future further research to some degree. First, the main emphasis of the study for effective vocal skills is the "sustention of end consonants in syllables" as initiated by LKT and this was translated in the perceptual and acoustics discoveries. Secondly, perceptual and acoustics findings showed that these articulation styles (conditions) in fact, the nine judges were different at the posttest phases.

Degree of rate is one aspect of Lessac Kinesensic Training that gives a speaker/trainee the opportunity to speak in an unnatural manner but with conscious awareness. This was achieved by the participants of the study who, through explorations and awareness, gave meaning and duration to consonants and vowels at pot phase of the study. However, mean and maximum intensity decibel levels were not manipulated as same measures were used for both phases of recordings. Past studies carried out over duration or extended speech rate (Lessac, 1967; Dromey and Ramig, 1998; Munro, et al.1996; Wohlert and Hammen, 2000; Picheny, Durlach, and Braida 1985; and Tjaden and Wilding, 2004) mention that at the onset of consonant explorations, actors generally have a slow speaking rate which increases overtime as they master a speech style with a standard rate through a training course.

The research showed that acoustic and perceptual results differ greatly between the acoustic and survey questionnaire and perceptual and survey questionnaire of the participants with the aid of a Venn diagram. Another observation was what the participants perceived to be significant but proved otherwise by other measures used for assessment. While what the participants indicated that they were not aware of proved otherwise by the acoustic and perceptual measurements. Overall, the perceptual findings gave detail to articulation styles but less of end consonants texture. The acoustic findings

did not account for the very gradual slopes that may have been salient in the study due to spectral analysis. Nevertheless, the considered slopes and peaks at post phase of the study was a characteristic of a good diction by LKT definition.

With the above findings, there were limitations to the study and they are as follows: the limited amount of time given to the participants in training, the acoustic tool for analysing the recordings, the inability to assess the participants' concentrated energy used at different speech renditions. Nevertheless, the treatment and principles adopted in the study were for first time users of the pedagogy and as a result of the nature of Nigerian languages and the unconscious attitude to drop end consonants in syllables, Lessac Training Research Institute recommends intensive and several weeks of training to ensure proper exploration of different energy states. The current study lasted eight (8) weeks and two (2) hours a day which can be concluded to be insufficient for proper embodying of the pedagogy's principles.

There was no room for generalising the participants' use of the pedagogy and how effective it was for them. What was deduced was in the extemporaneous speeches of the participants. Some of them showed a high degree of awareness while they expressed their views on the training and also their perception on the pedagogy. Throughout the training, the study observed a little tilted but not too natural speech at post recording and this thus revealed the effect of LKT on the participants. Participants were invited to combine consonants and to achieve a more natural rate of speech which would result in an increase in their dialogue sequences while still observing the rudiments for being intelligible. Six months after the training, while doing assessment of the trained participants as a feedback, it was observed that they were applying the training to their, performances and everyday situations.

The performance text used, *Hopes of the Living Dead,* was chosen due to its multilingual feature – as it addressed many Nigerian languages, and the participants for the study were of different tribes in Nigeria, and because the text readily lends itself to allowing them embrace their individual accents. Also, the *Lessac Consonant Selection* was adopted as it helped speakers observe salient sounds dropped when speaking carefully or rapidly. The

participants were encouraged to speak their first language in order to observe how they carried over the treatment to other forms of speaking or language which seemed interesting to the study but was not documented in their present study.

In terms of the body posture and breathing, the study observed that the participants showed great degree of consciousness which overtime, brought about awareness in their voice and body expression. More of what can be concluded in the study is the way traditional modes of learning are shaped for classroom instruction and learning. By this, it means that student actors can then carry over to performance space as observed by Hirsch (1987). Lessac Kinesensic training continues to allow for paradigm shift from "teacher-centred transmission of knowledge" to a "learner-centred" approach which has been observed by different practitioners (Munro and Coetzee, 2005; Munro and Wissing, 2007) in different geographical locations. In the words of Munro and Coetzee (2005), "Lessac Kinesensic training is quite communicative and socially constructed" as it continues to improve the resonance of users like the participants of the current study. A follow-up of how they have applied the training indicated that there was a self-to-self teaching organically growing in the participants.

Based on the results of the study, it can be concluded that there is improved articulation, body and voice expression and a self-teaching process that is bound to develop into a vibrant voice and speech community in the training of undergraduate actors. The effect/goal of Lessac Kinesensic is to produce an actor who does not let her sounds drown in her; rather she is, while playing with purpose, engaging her audience in an intelligible manner. Another goal of Lessac Kinesensic is that it discourages the imitation of copying a teacher or co-actors in the movements of lips, teeth, tongue and muscles that control speech. It gives room for developing oneself while doing exploration exercises. Further studies are encouraged to determine the effect of other principles of LKT such as:The 'Human Likeness' Principle, The 'Carefreeness' Principle, The 'Balanced Muscle-Tonicity' Principle, The 'Vocal Sound Stream' Principle, The 'Curvo-Linear' Principle, The 'Generalisation' Principle, The 'Unique Event' Principle, The 'Distribution' Principle, The 'Diminishing Fatigue' Principle, The 'Time-Lag Catch-Up' Principle, The

‘Wave’ Principle, and The ‘Kinematic’ Principle and what acoustic results can be gained towards improving the Nigerianundergraduate actors’ voice and speech in performance. The current findings show that decibel values, habitual patterns in speech, posture and breathing can be a form of therapy for effective use of voice and body in expression.

Finally, this research shows the extent to which the articulation is improved, reduced decibels, awareness, body posture, and breathing, all synchronize with actor training. Further research may focus on socioeconomic factors, accents, the harmonisation of other pedagogies which will allow the undergraduate actors to choose from, when applying them to performance space. The summation here is that LKT has been effective as a form of therapy for voice, speech, body and mind development.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

This chapter presents the summary, recommendations and conclusion of the study.

5.1 Summary

This study focused on the effect of Lessac Kinesensic as a vocal pedagogy among the educational theatre undergraduate actors in the University of Ibadan. For this reason, independent and moderating variables were investigated in relation to dependent variables. The independent variables were voice, speech, body and mind for vocal expression. Years of experience, first language served as the moderating variables, while expression, intelligibility, and vocal skills were examined as dependent variables. Sixobjectives were derived from six research questions.

For adequacy and effectiveness of the study, a self-designed conceptual framework was developed; cognitive behavioural therapy and source filter theory were adapted as theoretical framework for the study. Relevant literature on psychophysical training, voice, speech, vocal qualities and acoustics and perceptual studies on actor training were consulted. Empirical reviews on the effectiveness of vocal pedagogies for actor training under various subheadings were also consulted which was concluded with an evaluation of reviewed literature to make the study robust and create room for further research.

The population of the study comprised both male and female undergraduate actors of University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, Nigeria, Ife. Multistage sampling procedure was used in selecting the participants from the population. A total of seventeen (17) participants were used for the study.

A self-developed questionnaire and feedback were used as instruments for the study. The descriptive statistics of frequency counts and percentage to analyse demographic profiling of the participants while ANCOVA and Estimated Marginal Mean were used to test the hypotheses set at 0.05 level of significance. For the acoustic analyses Acoustic software: SFS/ESection Version 2.2 (2007-01-01) (c) 2007 Mark Huckvale University College London http://www.phon.ucl.ac.uk/resource/sfsand PRAAT version 6.1.16 (1992-2020) by Paul Boersma and David Weenink http://www.praat.orgto determine the average and maximum loudness concentrations which is typically between 20-40 dB for each sentence per undergraduate actor per phase.

The perceptual data from the judges and the feedback from the participants served to a greater degree as qualitative data. The body measurements data also served as an effective tool in reorienting the participants to the proper breathing postures. It was also observed that, during the study, some of the participants shed some weight through the explorations.

According to the results of the analyses, it was revealed that there was a great margin/difference between male and female undergraduate actors in both universities. Results also revealed that the vocal pedagogy used in the study had significant improvement on the treatment group as commented by the participants and the judges' assessments. Furthermore, there were significant improvements in the vocal expression, body postures, breathing patterns but not on body expression as that was not the purpose of the study. The study further showed significant improvement in the vocal skills, intelligibility and awareness of articulating sounds, words and sentences while retaining the messages in them.

There was a great influence of LKT as a pedagogy on the Nigerian undergraduate actors judging by the response of the selected participants of the study to their voice, speech, voice qualities, proper body postures and embodiment of the principles in training. In terms of the vocal skills and how LKT as a foreign pedagogy improved the participants' vocal performance, it was discovered that LKT had significant influence upon the acoustics and perceptual evaluations, for communication and performance, and that voice qualities are mainly dependent on acoustical properties, and not necessarily on the

impact/influence of first language. The findings of this study not only support existing studies, but also support the hypothesis that LKT has a direct impact on voice, speech, body and mind to create further studies on pedagogies, communication and performance studies in the Nigerian context.

From the study, it was observed that the participants got an opportunity to learn about other vocal approaches, their principles, their focus on different pedagogies and the choice of LKT for the study which they initially queried. They also gained an understanding of all the principles of LKT which at first, was not well received but through a careful and organic progression, the adopted principles were put in place with the aid of Leitmotif Diagram (see Appendix J) designed by Arthur Lessac. Through the training which demanded a psychophysical approach, the factors were addressed and resulted in the undergraduate actors improving organically rather than mechanically in their performances.

The study also established that breathing and body postures, audio recording at two levels of the training, had effect on the vocal expression and intelligibility among the undergraduate actors as participants of the study.

5.2 Recommendations

Based on the findings of the study, it is hereby recommended that voice and speech pedagogies be incorporated into the undergraduate actor teaching curriculum at all levels and their efficacy measured periodically in Nigerian universities. Voice and speech experts should be encouraged to be more knowledgeable about different vocal pedagogies and what they focus on in order to create an embodied undergraduate actor. Voice and speech experts and directors should be encouraged to understand actor training pedagogies and the principles to determine which works for the general undergraduate actors. There should be proper acoustics and perceptual measurements and documentation from the first year in order to monitor individual undergraduate actor's growth in a B. A. Theatre Arts programme. This however calls for the need of a functional laboratory with up-to-date software to meet global standards. Universities in Nigeria should see the relevance of actor training especially vocal training and the need to develop an indigenous pedagogy to

meet the growing demand of the undergraduate actor on stage and possibly screen. There is a need for a vibrant voice and speech community in Nigerian universities to help tackle the needs of the scavenging undergraduate actors of human behaviour in accent, speech and mannerism.

5.3 Conclusion

In concluding this study, it is paramount to state that pedagogical approaches or tools should resonate and give room for different paradigm shifts and researcher and research should help shape traditions for classroom instruction and learning. By this, it means that undergraduate actors can then carry over the skill so acquired to performance space. Following existing studies that attempted to situate Lessac Kinesensic Training within the current discussion of outcomes based on education, the present study has found out that LKT is an effective voice-building tool.

Vocal pedagogical tools and their focus, like LKT, should allow for inclusivity of first language by the actors, employing diverse accents in performance spaces without losing the message conveyed by the playwrights, and the participants are encouraged to engage in a self-to-self teaching. LKT continues to allow for paradigm shift from "teacher-centred transmission of knowledge" to a "learner-centred" approach which has been observed by different practitioners in different geographical locations. Lessac Kinesensic Training is quite communicative and socially constructed as it continues to improve the resonance of users like the participants of the current study. There is also greater chance of modifying Lessac Kinesensic training into a home-grown pedagogy in Nigeria and Africa as observed in studies carried out in South Africa, Kenya, Brazil, and Puerto Rico to mention a few.

With all that has been found in the study, one cannot conclude in terms of gender as only one male was a part of the treatment group. An observation in the study are the kinds of phrases used to encourage the undergraduate actors in improving their vocal expression. Very often, practitioners of vocal pedagogies employ phrases such as 'project', 'attack and bite your sounds', 'change your oral posture' which for some scholars is termed as an artificial training method. Like the study which employed Lessac Kinesensic pedagogy,

the expression used for the training was ‘I invite you to sense, taste, feel, and explore sounds’, ‘become aware of what you are exploring’ and ‘body energies as they appeal pleasurably to your body’ – this is seen as a psychophysical sensing awareness. The psychophysical approach helped the undergraduate actors in the study to organically understand the transformations in their body through different energy states.

However, mechanical exploration in preparation for performance and everyday situation yielded little or no result that would have been expected for an embodied and expressive actor. Since there are factors that affect the way we speak in performance and everyday situation, an embodied pedagogy that is inclusive for African languages and accent is undoubtedly desired.

Nevertheless, vocal expression, intelligibility, vocal skills, breathing and posture serves as factors that undergraduate actors need to develop for optimal performance in the university theatre training. We, therefore, conclude that the principles of any suitable vocal pedagogy, the focus and emphasis in terms of voice, speech, body, and mind, should be taken into cognisance regardless of first language, geographical location, years of actor training experience and knowledge of other existing vocal pedagogies, to contribute significantly to developing an embodied and expressive undergraduate actor.

In conclusion, the local context of this study may be pivotal to the introduction of indigenous variants of LKT as a home grown vocal pedagogy.

5.4 Contributions to Knowledge

This study identified specific factors that hinder vocal life, such as: poor vocal expression, incomprehension of the prosody in dialogue communication in performance, the inability to measure the outcomes of training, knowledge of the principles guiding any the pedagogy in training, and incorrect posture that altogether affect breathing. All of these contribute to the creation of a reverberant vocal life expression and clarity between the exemplified undergraduate actors. The training used psychophysical training method because it solved the above factors and causedundergraduate actors to improve their performance organically rather than forcefully.The study also determined that recording

before and after training is an effective measurement method for learning outcomes for any further study for training actors as this had an impact on the vocal expression and intelligibility of the undergraduate actors who participated in the study.

5.5 Suggestion for Further Studies

It was suggested that a study of this nature should be explored among universities and institutions of higher learning that offer acting programmes for undergraduate actors and Nollywood actors in Nigeria with a view to establishing a home-grown pedagogy. Studies could also be carried out on other socio-demographic and socioeconomic factors as they portray accent training for use in performance which were not examined in the study.

In addition, experimental studies could be carried out by other researchers on the effect of speech education on actors, behavioural attitudes of undergraduate actors to speech training and performance, and the modification of existing vocal pedagogies among undergraduate and professional actors in Nigeria.

It was further suggested that studies be explored as to the origin of existing vocal pedagogies, its target group, advocates and critics. Some things lingered during the study which begs for investigation on biases that exist with Lessac Kinesensic Training as opposed to other vocal pedagogies, this bias may affect the receptiveness of other undergraduate. Through practical workshops, further studies may yield greater insight and develop an indigenous experience to voice, speech, body and mind exploration.

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APPENDIX A: Expected Outcomes from the Training – Behaviour and Vocal

Participant 1 – What I hope to gain from this training is to improve is first of all is to improve in my speech and to imbibe more of Lessac training in everyday speech, acting and my normal day to day activities.

Participant 2 – I am hoping to learn more about speech and how to speak well, and express myself better.

Participant 3 – I know I have a very strong voice and I know I have to make it better. Because of the many patterns and manners of speech that we have: I want to be able to reshape my speaking voice.

Participant 4 – At the end of this training, I expect to be a better speaker, one that observes all the necessary things for speaking like breath control, modulation and all of that and to be more confident.

Participant 5– I want to learn how to align my thoughts with my dialogue and improve in the way I speak, walk, sit and understand all the skills in the technique for my acting career.

Participant 6 – I tend to talk really fast so I want to learn how to calm down and make my words clear to my audience everywhere and most especially on stage.

Participant 7 – My expectation for this training is to help improve my speech and to be a better news person in the future.

Participant 8 – One thing I will like to achieve at the end of this training is how to leave my mother tongue and enter into character or use something different. I don't want to have the inhibition to use my normal way of speaking. I don't want my normal speech pattern to affect the character I am playing. For this training, I want to learn how to improve my voice, clarity and posture.

Participant 9 – I want to improve my speech because my mother tongue always gets in my everyday speech and acting. I want to learn to pronounce well and hope to become a better person.

Participant 10 – I want to be confident when I talk. I don't want to stammer or mumble my words. I am always fidgety when I am called upon to speak.

APPENDIX B: Post Training Feedback, Outcomes, and Gains – Behavioural and Vocal and Ongoing Discovery

Participant 1 – From this training, I've come to realise and be more aware of my body expression; my body movement; my breathing; how I control my emotions while portraying or saying different lines. And I've become more of my speech and the way I say things. Sometimes when I say a particular word: something in me just tells me "okay you just said that wrong" and I would correct myself. So I've become aware. In helping others, I now try more to let them know that this is how it should be done not just let them try to fake how to learn it but for them learning how to feel it in them. I've actually gained a lot from this training.

Participant 2 – So far the training has been interesting. It has been great fun for me. I have learnt how to taste and feel consonant sounds better – which has been helping me to speak better, articulate myself better and I also realise that my daily conversations with people has improved. And people will tell me you speak good; and this has really been fun for me; and I am happy that I am a part of this training.

Participant 3 – I have learnt the importance and relevance of good speech, especially in terms of pronunciation for better understanding. I have learnt the easiest way to convey expressions through speech. As a director it has given me a way of working with my actors and how I can get them to do other forms of characterisation and speech variations by using some of the techniques we learnt in the training. Maybe blindfolding them, making them to play with the words by that I discovered that it really works because it helps you – when you play, you do not, you are not conscious of what you are doing but you see it becomes beautiful, and when it is not consciously done, it becomes better. Personally, what I have held from this training is that, speech consciousness is very, very key but we overlook it maybe deliberately or not deliberately. But when you are conscious of it, it is very difficult but when you are being conscious of what you are usually not conscious of, it is very difficult but it is very effective.

Participant 4 – I really enjoyed myself in the training. Though it was very unlike me; the sitting posture of really being upright and all. Most times I like to be really comfortable. I have learnt to move from my comfortable zone to the original zone where my body is supposed to be. And then, I have learnt to taste to exert different body energies, to speech and my everyday life and both in performances also. Then I hope to really carry this on: because it has helped me and built me and my confidence in talking to people. It has built my confidence as a speech person. It has actually helped me to be able to relate to others what I have learnt too. And then, I hope to carry this on forever: because I really enjoyed it and it just makes you feel more intelligent. Even if you really know what to say, or know what you are doing, but the training just makes me sound more intelligent and more aware of sounds and how to produce sounds and all of that.

Participant 5 – For what I am taking home, I have been taught to watch my posture it has a lot to do with how sounds come out of me. And to be conscious and not let it ever stop; to always continue to be conscious of what I am saying and how I am saying it. And to always feel and try different things and play with what I am saying. Comparing what I have learnt to what I used to assume of speech and the rest: I used to think it was very rigid and there are rules to follow but this training just makes it all interesting and you will want to try out new things and it is more interesting this way. And for how I am relating it to my everyday life, well, so most times you don't remember particularly but I guess, when I do, I try to correct and being aware and I guess it is now coming into my unconscious self now. It is helping a lot especially with my acting too.

Participant 6 – In my pre-recording I remember saying that I used to talk fast, I still talk fast a bit but it's not only reduced now but it has also made me aware of my words and pronunciations. And even if I am going to be talking fast, I should make sure that I am making sense to my audience. And it has also helped me to concentrate more linking and not only relying on my voice texture to portray emotions but also the way I pronounce my words.

Participant 7 – I have gained a lot from this training and it has helped improve my speech in terms of…I can use my performance in *Marriage of Anansewa* for example: because, it is my first time coming on stage since my 100level in terms of a speaking role. I could tell

the difference; this training helped me to get into character; because nobody actually helped me to do that. When I read the script again and I read my lines, I could tell a big difference; and when I came on stage; and I pronounced my words; I noticed that people could hear me from the back; unlike before that my voice couldn't get past three rows.

Participant 8 – One thing I would say I have gained from this training is awareness. Awareness of the way I stand; the way I walk; the way I speak. I am aware of my speech patterns, the consonants. The consonant I would say has been the most important: I notice that my speech has become clearer. I am aware of the way I pronounce my consonants and when I walk, I am aware that I have to be erect, when I sit, when I stand. My breathing has improved tremendously. I realised that when I breathe, I don't feel my stomach increase but now I can. It has helped me as a speech student to help other students with their breathing and the way they speak.

Participant 9 – I am so excited because I have learnt and gained a lot. Because my normal self, I know the way I read and all. But now, before I talk or before I say word or any sentence, I breathe well, calm and say it confidently. And in my performance – let's say *Marriage of Anansewa*, I was able to read well as though I am one speech person, I was so happy that this Lessac training has really, really helped my life.

Participant 10 – Recently, I have been aware of how I sit, my posture, sitting posture, walking posture, standing and my breathing. I have tried to work on my stomach most of the time. I try to correct people around me to sit up and adjust their bodies and listen to their body more. As a coach, I have been able to be aware of so many things like: consonants, vowels and pronunciation and how it feels in the body. I have been able to help my colleagues, fellow students that I am coaching to observe every punctuation mark, to be able to change energies while rendering so many lines. I have been able to teach them how not to be tensed while talking, how not to rush their words. I try to teach them to be aware and not conscious of words and what they are saying. I myself I have been trying to be aware and not conscious and each time I am conscious, I make so many mistakes and that's all.

APPENDIX C: QUESTIONNAIRE

University of Ibadan, Ibadan

Faculty of Arts

Department of Theatre Arts

Questionnaire

Lessac Kinesensic Training on Vocal expression Questionnaire (LKTVPQ)

Dear Participants,

This questionnaire is a Ph.D research to investigate Lessac Kinesensic training for improving the success of vocal expression among undergraduate actors. It is important that participants should have worked and/or studied voice and speech skills in a university as an actor or/and has specialization in speech/acting at the third and final year of an acting B.A programme.

The researcher solicits your precise answers to the questions asked in this questionnaire. The answers given will strictly be for the research study; therefore the confidentiality of your response is greatly assured.

Thank you in anticipation of your response(s).

Yours sincerely,

A. A. Benson,

Researcher

Section A: Demographic Information

Instruction: Please kindly tick [√] fill the space provided below.

1. Name of Institution:_____
2. Age: 18-22 [ ] 23-27 [ ] 28 and above [ ]
3. Sex: Male [ ] Female [ ]
4. Years of Actor Training Experience: 1-2 [ ] 3 and above [ ]
5. What is your first language? English [ ] Nigerian language [ ]
6. What language(s) do your parents communicate with you in? _____

   _____

Section B
Knowledge of Vocal Training (KVT)

7. What type of vocal pedagogy do you apply to your actor training? Berry [ ] Lessac Kinesensic [ ] Knight and Thompson Speechwork [ ] Student to Student []
8. What does the pedagogy focus on? Body [ ]Mind [ ] Voice [ ]Speech[]
9. Do you always have to memorize the principles of the pedagogy for performance? Not at all [ ] Very little [ ] Somewhat [ ] Quite a bit [ ] A lot [ ]
10. How knowledgeable are you of the voice, body and mind work of Lessac Kinesensic Training? Not at all [ ] Very little [ ] Somewhat [ ] Quite a bit [ ] A lot [ ]

SECTION C

Instruction: Please kindly tick [√] the appropriate option applicable to you. SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree

Undergraduate Actor's Vocal Intelligibility Scale (UAVIS)

S/No.	Items	SA	A	D	SD
11.	I like the pedagogy used in training because it continues to improve my vocal expression on the whole.				
12.	I like the use of the consonant orchestra because it creates an awareness of the production of vowel and consonant sounds.				
13.	The pedagogy makes my vocal skills easier and sense that I am intelligible during vocal expression.				
14.	The pedagogy makes my vocal and body expression clearer to me and to other actors.				
15.	I am always conscious of individual sounds and syllables during a vocal expression.				
16.	To an extent I organically grow in the pedagogy used in training to create a well-developed actor.				
17.	I always have challenges being in character because I am unwilling to separate from old habitual patterns during a vocal expression.				
18.	I see breath and posture as important aspect of character development.				
19.	The pedagogy trained in gives me the ability to always control my breath and emotions while conveying my thoughts to other actors during a vocal expression.				
20.	The pedagogy trained in helps me create vocal dynamics and a truthful expression of the character's thoughts during a vocal expression.				

SECTION D

Instruction: Please kindly tick [√] the appropriate option applicable to you. SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree

Undergraduate Actor's Vocal Expression Scale (UAVES)

S/No	Items	SA	A	D	SD
21.	The pedagogy in training was fun for me.				
22.	The pedagogy in training was interesting for me.				
23.	I now find a connection between my voice, body and mind				

	during performances.				
24.	Through body explorations I see myself developing different body energies.				
25.	Through vocal explorations I see myself developing an interesting character.				
26	During explorations, I find it difficult to align my thoughts with my breathing process for performances.				
27.	To an extent I can technically use the pedagogy in training to "performance" situations				
28.	To an extent I can technically use the pedagogy in training to "real life" situations				
29.	The pedagogy in training helps me to explore; tasting, music-making, communicating through feeling and sensing sounds in performances.				
30.	The pedagogy in training will help me do a carryover for performance and real life situations in the future.				
	Mother Tongue Interference: Ability to Shift Idiolectically (MTI:ASI)				
31.	My mother-tongue always interferes the *duration* of sounds during performances for character portrayal.				
32.	My mother-tongue always interfere my speech delivery *rate* during performances for character portrayal.				
33.	My mother-tongue always interfere my speech in terms of sounds production during performances.				
34.	I always think in my mother-tongue during a staged-reading and performance for character portrayal.				

APPENDIX D: PERCEPTUAL GRADING SHEET

Perceptual Grading Sheet

Age: 21-30 [ ] 31 and above [ ]

Sex: Male [ ] Female [ ]

Years of Speech Training Experience: 1-2 [ ] 3 and above [ ]

Participants (Pre andPost)	1	2	3	4	5	6	7	8	9	10
	The Old Resident									
Pre										
Post										
	Normal Articulation									
	Over Articulation									
	Poor Articulation									
	Sustention of End Consonants in Syllables									
	Monologue									
Pre										
Post										
	Normal Articulation									
	Over Articulation									
	Poor Articulation									
	Sustention of End Consonants in Syllables									
	First Language									
Pre										
Post										

	Normal Articulation									
	Over Articulation									
	Poor Articulation									
	Sustention of End Consonants in Syllables									
	Dramatic Reading									
Pre										
Post										
	Normal Articulation									
	Over Articulation									
	Poor Articulation									
	Sustention of End Consonants in Syllables									

APPENDIX E: TRAINING GUIDE

Topic that were considered for Lessac Kinesensic Training (LKT) Programme

1. Introduction of the intervention.

(a) Body measurements,

(b) Pre-recording of:

   (i) Choice Monologue,

   (ii) First Language,

   (iii) The Old Resident Speech, and

   (iv) Excerpt from Ola Rotimi's ***Hopes of The Living Dead***

   (v) Expected Outcome from the training – **Behaviour and Vocal**

2. Four selected principles of Lessac Kinesensic training as follows:

   (a) The Human "Musical Instrument" Principle

   (b) The Principle of "Inner harmonic Sensing"

   (c) The "Perceptive Awareness" Principle

   (d) The "De-Patterning" Principle

3. Lessac Kinesensic training as a psychophysical approach

   (a) Embodied actor training of the voice, speech, body, and mind.

   (b) Identifying the various muscles and bones that shape sounds for vocal artistry during vocal expression and everyday situations for the undergraduate actor.

4. How the actor's body works:

   (a) The Familiar Event,

   (b) Inner Harmonic Sensing,

   (c) Body Esthetics, and

   (d) Organic Instruction.

5. Importance of breathing and posture in relation to resonance for vocal expression.

6. The Consonant Orchestra, using the six senses for tasting, music-making and communication.

7. Vibration and the essence in vocal expression.

8. The Vocal energy (NRG)
   (a) Consonant NRG
   (b) Tonal NRG
   (c) Structural NRG
9. The Body energy (NRG)
   (a) Buoyancy
   (b) Radiancy
   (c) Potency
   (d) Inter-Involvement
10. Application of the Lessac marking guide to vocal delivery for the undergraduate actor.
11. Application of the Vocal NRG to vocal expression.
12. Application of Body NRGs to play texts and monologues
1. Review of all topics treated in the training.
2. Post-recording of:
   (a) Choice monologue,
   (b) First language,
   (c) The Old Resident speech and
   (d) Excerpt from Ola Rotimi's ***Hopes of The Living Dead***.
   (e) Feedback, Outcomes, and Gains **– Behavioural and Vocal and Ongoing Discovery.**

.

APPENDIX F: TRAINING GUIDE FOR VOICE, SPEECH, BODY AND MIND EXPRESSION TREATMENT GROUP

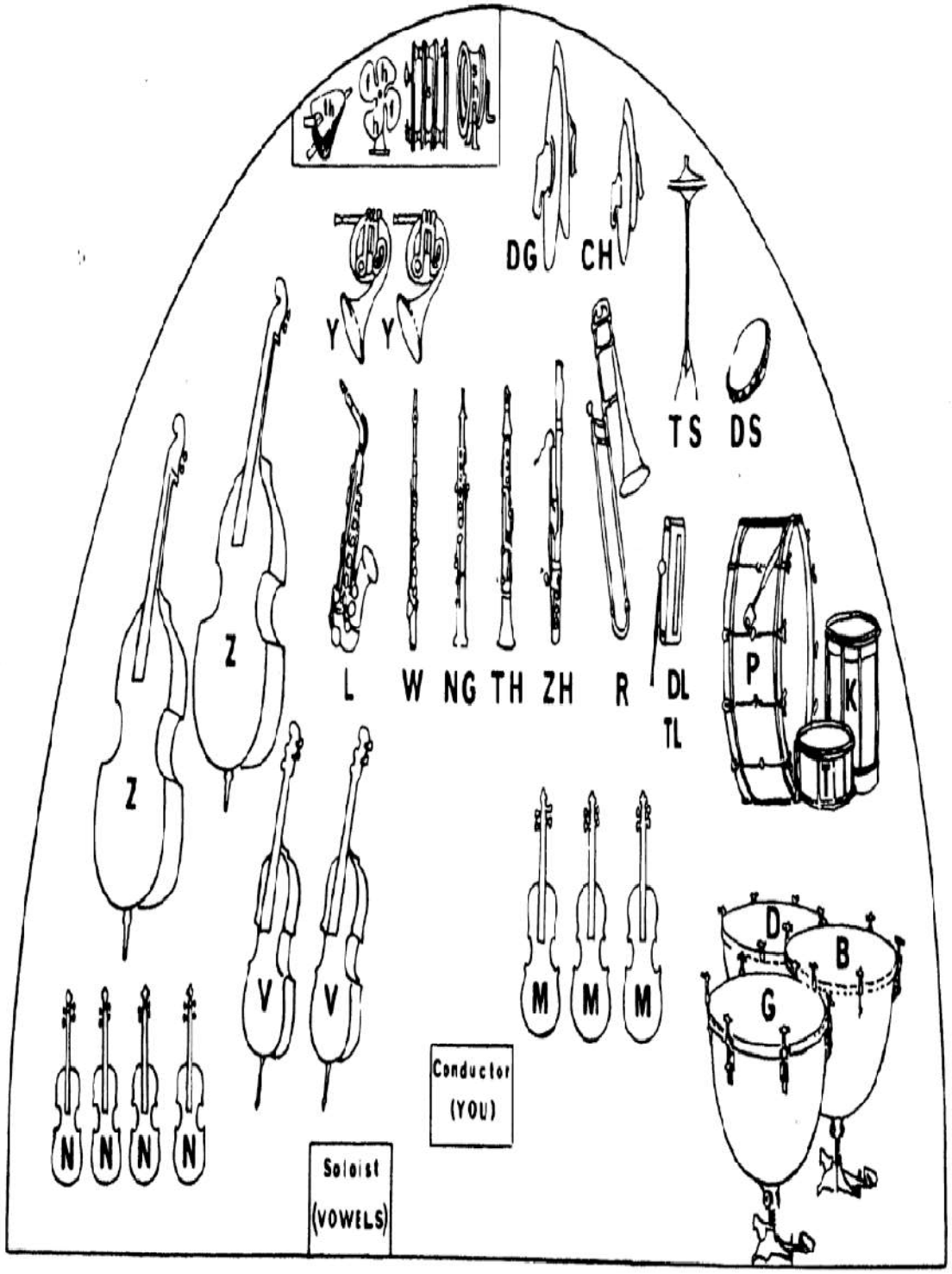
Week and Duration	Training objective	Content	Method	Resources/ Instructional material	Evaluation
Week 1 90mins (once a week)	By the end of the contact period, participants should be able to: state the reason for the training and the essence of voice, speech, body and mind training.	Administration of questionnaire Different types of vocal pedagogies and the reason for adopting Lessac Kinesensic training.	- Direct instruction. - Tune up: voice, speech, body and mind warm up. - Tune down: voice, speech, body and mind warm up.	Pre-recording of choice monologue, first language and The Old Resident speech, ***Hopes of The Living Dead***. Body Tune-ups.	State the need to train the voice, speech, body and mind of the undergraduate actor for character portrayal. State unclear aspect of the questionnaire.
Week 2 120mins (three times a week)	By the end of the contact session, participants should be able to: State the essence of Lessac training. List the principles of pedagogy and the ones adopted for the training.	Essence of Lessac training. The principles of Lessac training. The principles adopted for the training.	Direct instruction - Tune up: voice, speech, body and mind warm up. Tune down: voice, speech, body and mind warm up.	***The Use and Training of the Human Voice.*** ***Body Wisdom***: Showing the principles of Lessac training.	State the essence of Lessac Kinesensic training. List the principles of the training and the principles adopted for the training.
Week 3 120mins	By the end of the contact session,	Importance of embodied actor training, the	Direct instruction.	Articles on Embodied actor	State the importance of embodied actor

(three times a week)	participants should be able to: State the importance of embodied actor training. Identify the bones and muscles that shape sounds. Lessac's four ways on "How the body works".	bones and muscles that shape sounds and Lessac's four ways on "How the body works".	- Tune up: voice, speech, body and mind warm up. Tune down: voice, speech, body and mind warm up.	training, chart showing the bones and muscles that shape sounds. ***The Use and Training of the Human Voice.*** ***Essential Lessac***	training, identify the bones and muscles that shape sounds and state Lessac's four ways on "How the body works".
Week 4 120mins (three times a week)	By the end of the contact session, participants should be able to: Explore all the consonant orchestra in their bodies, in words and sentences. (Tasting, feeling, sensing through Music-making and Communicati on). Describe vocal energies (NRGs)	Exploration of the consonant orchestra, making sentences through awareness. Describe the three vocal energies	Vocal and Body Tune-up. Body explorations on how the body works. Using dramatic pieces, renowned speeches for explorations.	1. ***The Use and Training of the Human Voice.*** 2. ***Body Wisdom*** 3. ***Essential Lessac*** Diagram of the consonant orchestra. 4. Explore instruments as they align with the human body.	Describe through playfulness the consonant orchestra. Describe the three vocal energies. State the importance of awareness.
Week 5	By the end of	Importance of	Vocal and	1. ***The Use***	State the

120mins (three times a week)	the contact session, participants should be able to: State the relevance for vibration in the body that can be a carryover to performance space. The benefits of the three body energies (NRG) to vocal and body expression. The use of the marking guide using *The Old Resident.*	the body energies. Importance of vibration to vocal and body expression in performance.	Body Tune-up. Body explorations on how the body works. Using dramatic pieces, renowned speeches for explorations.	***and Training of the Human Voice.*** 2. ***Body Wisdom*** 3. ***Essential Lessac*** 4. ***Hopes of the Living Dead.*** Monologues	importance of the body NRGs. State the importance of vibration to vocal and body expression in performance.
Week 6 120mins (three times a week)	By the end of the contact session, participants should be able to: Apply Lessac marking guide to play texts. Demonstrate the vocal NRG application to vocal expression through	Importance of Lessac marking guide. Demonstration of Lessac marking guide to vocal expression.	Vocal and Body Tune-up. Body explorations on how the body works. Using dramatic pieces, renowned speeches for explorations.	1. ***The Use and Training of the Human Voice.*** 2. ***Body Wisdom*** 3. Hopes of the Living Dead. 4. ***Essential Lessac***. 5. Short videos of	State the importance of Lessac marking guide as different style to existing training method. Demonstration of Lessac marking guide to vocal expression. Independently do vocal explorations.

	explorations.			different application of the four body NRGs.	
Week 7 120mins (three times a week)	By the end of the contact session, participants should be able to: Demonstrate the body NRG application to vocal and body expression through explorations. List the adopted LK principles for the training.		Vocal and Body Tune-up.	1. ***The Use and Training of the Human Voice***. 2. ***Body Wisdom*** 3. ***Hopes of the Living Dead***. 4. ***Essential Lessac***.	State all the adopted principles of Lessac Kinesensic as they enhance actor training.
Week 8 90mins (three times a week)	End the training session, participants should be able to: Give feedback, gains and contributions from the training.	Post administration of questionnaire.	.Vocal and Body Tune-up. Post-recording of choice monologue, first language and The Old Resident speech, and excerpt from ***Hopes of The Living Dead***. Body measurements.	1. ***The Use and Training of the Human Voice.*** 2. ***Body Wisdom*** 3. ***Essential Lessac***. 4. ***Hopes of the Living Dead.***	State things remembered in the training that is an ongoing process State the benefits and shortcomings of the training as an embodied training tool.

APPENDIX G: LESSAC'S CONSONANT ORCHESTRA



APPENDIX H: LESSAC LIST OF WORDS FOR AWARENESS AND SKILL

PRACTICE WORDS COMBINATION FOR DIRECT LINK EXPLORATION, CONSCIOUSNESS AND AWARENESS IN ARTICULATION.

Grab it	Get out	Drag along
Stop up	Leads on	Back away
Bad actor	Run off	Massage it
Breathe in	Home owner	Wash up
That's enough	Give away	Sail away
Birth of a nation	Enough of it	Over all
Arrange everything	Because of it	Strong executive
Catch on	Missed out on it	This is it

PRACTICE WORDS COMBINATION FOR PLAY AND LINK EXPLORATION, CONSCIOUSNESS AND AWARENESS IN ARTICULATION.

Sob sister	Take time	Stack pack
Keep this	Smooth surface	Big deal
Stand back	Wisdom tooth	Can't be
What for	Wash clean	Canned goods
Big money	Hill country	Watch gently
Barrage balloon	Night report	It's good
Don't you	Predict weather	Exciting game
Match cover	Judge carefully	That's bad business
Gone forever	Room temperature	Word list
That's mine	Back with	Drop kick
Told him	Hot wind	Red car
Leave soon	Judge severely	Mysterious witch
Staff party	Those ships	Dark neighbourhood
Has been	This sheep	Ask not why
Loose talk	Last row	Understand patience

PRACTICE WORDS COMBINATION FOR PREPARE AND LINK EXPLORATION, CONSCIOUSNESS AND AWARENESS IN ARTICULATION.

Identical	Cognate	Semi-related
Stab back	Bribe paid	Stab me
Help pack	Keep back	Help me
Good deal	Bad time	Good news
Don't talk	Sit down	That seems good
Big guns	Dog collar	Good smoke
Stick close	Dark gray	Red zone
Even now	Five friends	Cute zebra
Some men	Seems so	Patent nonsense
Have vitality	Bequeath theatres	Mist shrouded
Life force	Quoth thus	Dead ship
Fence sags	Not George	Broad theme
Cloth thrown out	Did change	Asked them
Bad judge	This zone	Did that
Not Charlie	Hated tsetse fly	Won't throw it

PRACTICE WORDS FOR EXPLORATION, CONSCIOUSNESS AND AWARENESS IN ARTICULATION.

Firsts	Patience	Tennis	Serendipity
Seconds	Patients	Tens	Etymological
Thirds	Petitions	Tends	Ejectamenta
Fourths	Entrance	Tense	Synergistic
Fifths	Entrants	Tents	Extra-territorialism
Sixths	Thieves	Tenths	Rather
Sevenths	Thebes	Whirls	Recalcitrance
Eighths	Fines	Worlds	Recapitulative
Ninths	Finds	Whirly	Recapitulance
Tenths	Ben's	Worldly	Reconnoitered
Elevenths	Bends	Wouldst	Reconnaissance
Twelfths	Bashes	Couldst	January
Thirteenths	Batches	Shouldst	February
Fourteenths	Tracks	Wouldn't	Sanguineousness
Fifteenths	Tracts	Couldn't	Satiate
Sixteenths	Acts	Shouldn't	Characteristic
Seventeenths	Axe	Didn't	Palimpsest
Eighteenths	Asks	Hadn't	Wednesday
Nineteenths	Rubicon	Liaison	Amanuensis
Twentieths	Rubicund	Sapient	Amateurism

APPENDIX I: PAIRED SAMPLE FOR BODY MEASUREMENT

T-Test

[DataSet0]

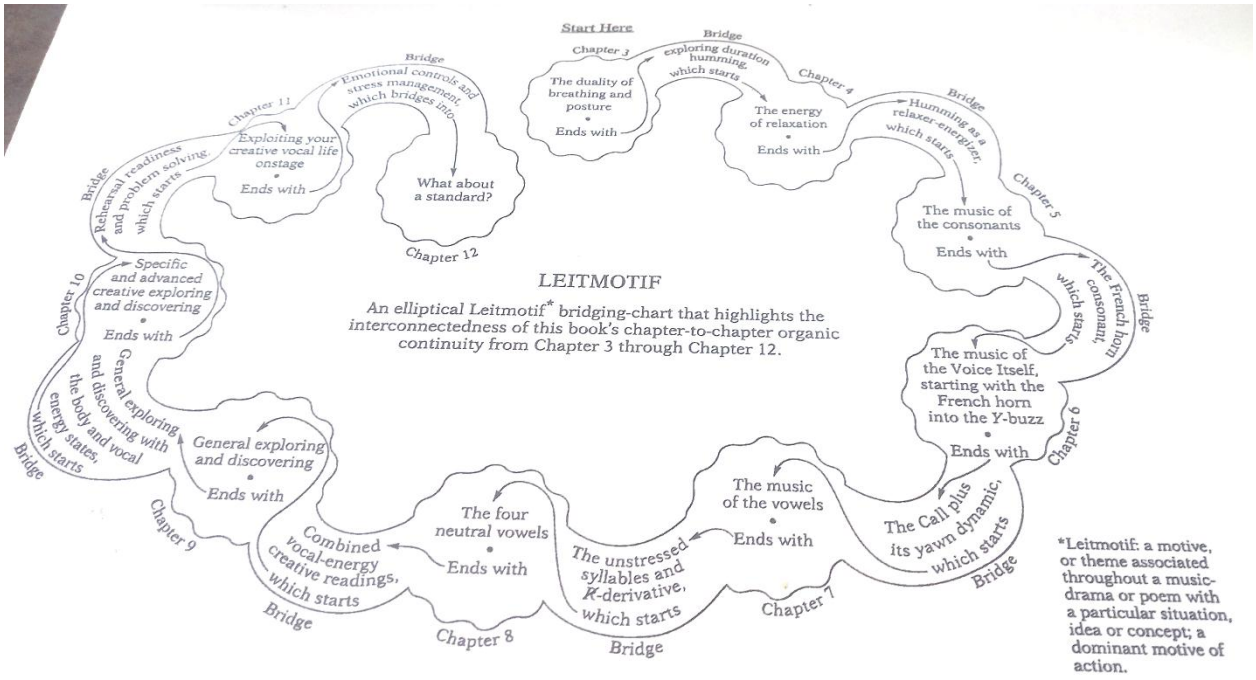
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Shoulder	15.8500	10	.94428	.29861
	Post_Shoulder	16.4000	10	1.02198	.32318
Pair 2	Pre_UpPosture	65.2500	10	3.40955	1.07819
	Post_UpPosture	65.8500	10	3.14510	.99457
Pair 3	Pre_CervSpine	9.3500	10	.78351	.24777
	Post_CervSpine	10.7500	10	.75462	.23863
Pair 4	Pre_SpineCoccyx	31.6000	10	1.14988	.36362
	Post_SpineCoccyx	32.6000	10	1.28668	.40689
Pair 5	Pre_SpineKnee	46.8000	10	2.22611	.70396
	Post_SpineKnee	47.0000	10	2.63523	.83333
Pair 6	Pre_Chest	33.9500	10	2.00624	.63443
	Post_Chest	34.8000	10	2.13698	.67577
Pair 7	Pre_Weight	59.0000	10	9.20145	2.90975
	Post_Weight	58.2000	10	9.53124	3.01404

Paired Samples Test

		Paired Differences					t	df	Sig.
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Shoulder - Post_Shoulder	-.55000	.36893	.11667	-.81392	-.28608	-4.714	9	.001
Pair 2	Pre_UpPosture - Post_UpPosture	-.60000	.61464	.19437	-1.03968	-.16032	-3.087	9	.013
Pair 3	Pre_CervSpine - Post_CervSpine	-1.40000	.77460	.24495	-1.95411	-.84589	-5.715	9	.000
Pair 4	Pre_SpineCoccyx - Post_SpineCoccyx	-1.00000	.84984	.26874	-1.60794	-.39206	-3.721	9	.005
Pair 5	Pre_SpineKnee - Post_SpineKnee	-.20000	.91894	.29059	-.85737	.45737	-.688	9	.509
Pair 6	Pre_Chest - Post_Chest	-.85000	.57975	.18333	-1.26473	-.43527	-4.636	9	.001
Pair 7	Pre_Weight - Post_Weight	.80000	1.54919	.48990	-.30823	1.90823	1.633	9	.137

APPENDIX J: LEITMOTIF DIAGRAM



APPENDIX K: ETHICAL APPROVAL

SOCIAL SCIENCES AND HUMANITIES RESEARCH ETHICS COMMITTEE (SSHEC)
UNIVERSITY OF IBADAN

Address: c/o Department of Sociology, Faculty of the Social Sciences

Chairman: A. S. Prof. Jegede, B.Sc, M.Sc (Ife), MHSc (Toronto), Ph.D. (Ibadan)
Tel:*+234-8055282418*
E-mail:sayjegede@yahoo.com, sayjegede@gmail.com,as.jegede@mail.ui.edu.ng

NOTICE OF FULL APPROVAL FULL COMMITTEE REVIEW

Re: EFFECTS OF LESSAC KINESENSIC TRAINING ON STAGE READING AND PERFORMANCE AMONGS UNIVERSITY STUDENT-ACTORS

UI/Social Sciences Ethics Committee assigned number: UI/SSHEC/2014/0001

Name of Principal Investigator: Abimbola Adeola BENSON
Address of Principal Investigator: Department of Theatre Arts,
Faculty of Arts,
University of Ibadan.

Date of receipt of valid application: **14th November, 2015.**
Date of meeting when final determination on ethical approval was made:

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and given full approval by the SSHE Committee.

This approval dates from **28/08/2015 to 27/8/2016**. If there is delay in starting the research, please inform the SSHE Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. All informed consent forms used in this study must carry the SSHE Committee assigned number and duration of SSHE Committee approval of the study. It is expected that you submit your annual report as well as an annual request for the project renewal to the SSHE Committee early in order to obtain renewal of your approval to avoid disruption of your research.

Note: the National code for health research ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the SSHEC. No changes are permitted in the research without prior approval by the SSHEC except in circumstances outlined in the Code. The SSHEC reserves the right to conduct compliance visit to your research site without previous notification.

Prof. A.S. Jegede
Chairman, SSH Ethics Committee

APPENDIX L: PICTURES OF TRAINING SESSION WITH THE PARTICIPANTS

The Researcher and the participants

During an exploration exercise: Expanding Sphere Sit-Ups for the four body energy states.

Lessac Body training as language training

Participants doing self-to-self warm-up and discoveries.

Feeling the vibration and sensing through the head and bone conductors.

Lessac work: Getting the body into a compact ball

Jockey-ride hop-sequence session completed.


CANTERBURY
OF NEW ZEALAND

Extending and Lengthening the whole body

Buddy Squats

Rocking the Hammock

Vocal exploration of consonant energies

Inviting participants to explore the body energies

Exploring the structural energy

Tasting, Sensing and Feeling process.