



### Impacts of supra-segmental phonemes in learning Speaking in English as a foreign language: A Case Study at faculty of education - Kordofan University

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#### Abstract

The present study was carried out in University of Kordofan at Faculty of Education during the period 2016-2018. The study aimed to investigate the impacts of supra-segmental in learning speaking in English language as foreign language, to identify the difficulties of pronunciation of the supra-segmental features “stress, intonation, pitch and rhythm”. The descriptive and deductive methods were followed. The primary data was collected through different sources including questionnaire, recorded oral test and personal interview for taking notes observation. Comprehensive sampling was used to select the English language lecturers in Faculty of Education and Faculty of Arts where the sample size compromises 18 lecturers to answer the questionnaire where 100 students in the department of English at Faculty of Education who were taught supra-segmental programs were selected from population size of 400 students to be given the oral test to measure segmental and supra-segmental features. The data were analyzed by Excel program using Chi-square Test to measure the differences. The results revealed that 94 % of lecturers stated that supra-segmental affect learning speaking in English language, 80 % mentioned that supra-segmental features are not well applied by the students whereas the supra-segmental phonemes according to oral test, students scored mean percent of 77% in the level of stress, 45% in intonation, 55% in rhythm and 44% in pitch. The difference between students score at level of stress and intonation was significant at 0.05 level with calculated and critical  $\chi^2$  values of 8.39 and 3.84 respectively, the difference between level of stress and rhythm was not significant at 0.05 level with calculated  $\chi^2$  value of 3.66 and critical value of 3.84 and the difference in scores between level of stress and pitch was significant at 0.05 level with calculated  $\chi^2$  value of 9.0 and critical value of 3.84. The difference between intonation and rhythm was not significant at 0.05 with calculated and critical  $\chi^2$  values of 1.0 and 3.84 respectively and between intonation and pitch was not significant at 0.05 with calculated  $\chi^2$  value of 0.011 and critical value of 3.84. The difference between rhythm and pitch was not significant at 0.05 level where the calculated value of  $\chi^2$  was 1.22 and the critical value was 3.84. It was concluded that most students faced difficulties in pronouncing the segmental consonant phonemes and have problems in segmental vowel phonemes due to mother tongue language interference. The highest scores were recorded by the level of stress and to some extent the rhythm while intonation and pitch recorded the lowest scores. It is recommended that instructors should raise students' awareness about the importance of learning supra-segmental features. In addition, students should be encouraged to use internet to communicate with English native speakers. Furthermore, supra-segmental must be considered in the teaching and included in the curriculum of English language.

**Keywords:** phonology, supra-segmental features – pronunciation

#### Introduction

In phonetics and phonology, any speech is actually divided into two: segmental and Suprasegmental. The term segment is "any discrete unit that can be identified, either physically or auditorily, in the stream of speech. Vowels and consonants are considered as small segments of the speech, which together form a syllable and make the utterance. Therefore, segmental features are related to vowels and consonants. Suprasegmental is a term used in phonetics and phonology to refer to a vocal effect which extends over more than one sound segment in an utterance, such as intonation, stress or pitch pattern. Therefore, the specific features that are superimposed on the utterance of the speech are known as suprasegmental features. The word “supra” means above or beyond the segmental value. It refers to properties of an utterance that apply to groups of segments, rather than to individual segments. Suprasegmental Although there have always been controversies around the importance of two levels of phonology (segmental and suprasegmental) in language teaching history, today there is a general consensus that both of these should be

taken into consideration to reach the goals of pronunciation instruction. However, time shortage is a factor that forces the teachers to set priorities and be selective of materials that have more crucial role in understanding and being understood than others both in segmental and suprasegmental level. The touchstone of this review is to examine the degree to which suprasegmental affect comprehensibility. This work concludes that suprasegmental play an important and crucial role in pronunciation teaching. Segmental and Suprasegmental features are of great importance in spoken English. Yet, these pronunciation features are marginalized in universities. This study that aims at improving the students' mastery of English segmental and suprasegmental features through the use of reflective learning method, The English pronunciation components are divided into segmental phonemes and suprasegmental phonemes. Segmental phonemes consist of vowel and consonant, suprasegmental phonemes, on the other side, have stress and intonation. In learning and practicing

English pronunciation, ESL learners are frequently failed in segmental components. The difference number of vocal and consonant sounds between English and mother tongue (L1) becomes the main factors of this difficulty. In other words, ESL learners are able to produce English sounds easily when they also exist in their native (L1) sound system. When the sounds do not exist in their native (L1), they have to do great effort to practice pronouncing them accurately and consistently. Whether it is necessary or desirable to speak a second language with native-like accuracy is often a personal choice; what is clear, however, is that certain miscommunications may occur due to lack of phonological awareness in the second language. This thesis also deals with segmental and suprasegmental properties and assesses each of these categories individually, although they can never be completely divided. Its aim is to summarise typical mistakes in English pronunciation of non-native speakers and mainly to find out how these mistakes are perceived, with the help of a practical research. In general, one can say that students of English are usually not trained in the segmental aspect much during their primary and secondary school studies and they are even less trained in the suprasegmental level. It can therefore come as a surprise to them when they realize that the lack of proper accomplishment of these features might impair their speech performance. The research will demonstrate whether it really is so. To be able to observe segmental and suprasegmental mistakes in practical use of English, a theoretical background must be drawn first. There will be a classification of segments – consonants and vowels – and suprasegmentals – stress, reduction, assimilation, liaison, elision, rhythm and intonation, based on findings of English phoneticians.

### **Objectives of the Study**

#### **The main objective of this study shown below**

1. To explore the influence of suprasegmental in learning English language speaking.
2. To facilitate the instruction of Suprasegmental, pedagogical priorities to reach the learner's intelligibility in spoken English.
3. To find out the important of suprasegmental phonemes in learning language speaking in university
4. To find the difficulty of mastering pronunciation as a result of segmental and suprasegmental impacts.

### **Significance of the Study**

The importance of Suprasegmental features probably denied in the teaching and learning of pronunciation. It improves English accent and pronunciation which play key factors in accent reduction and speaking ability in general, if we want our speech to be understood in the classroom, we need to help our students learn and practice both individual sounds and the overall musical pattern of the language. Secondly, the researchers have proved that roughly one half of people's communication is taken up by listening and listening is; therefore, an essential skill that students need to develop foremost when studying English as a second or foreign language. Thirdly, suprasegmental is the basic structure of spoken language which is different from the written language which is usually marginalized in day to day learning and teaching of English. Finally, Students of language and those who plan careers in language teaching, coaching, therapy, acting, and speaking benefit greatly as they can influence meaning by

intonation, stress, rhythm and other suprasegmental features. Hence, the knowledge of seven major types of suprasegmental features that exist in almost all languages of the world (assimilation, intonation, stress, rhythm, elision, linking, and juncture) are very significant for learning pronunciation of a language. The different languages of the world make their own choices of suprasegmental which differ from each other.

Literature reviews

### **Suprasegmental features**

Norman J. Lass (1976:225) <sup>[6]</sup> Stated that, Suprasegmental feature usually are listed either as the set of features consisting of pitch, stress and quantity, or defined as features whose domain extends over than one segment, either definition is completely adequate, if suprasegmentals are to be define with reference to their domain, then pitch stress and quantity not qualify as suprasegmentals when they happen to be manifested over a single segment in other hand, there are other features whose domain is larger than single segment that don't function in the same way as do the suprasegmentals, for example, the palatalization of a consonant cluster in such a manner that the stress, pitch, and quantity behave in a way that sets them apart from features determining segmental phonetic quality, the definition should be revised.

It appears that suprasegmental features relate to segmental features by constituting an overlaid function of the inherent features. Inherent features can be defined with reference to a segment itself. The fundamental frequency of an inherently voiced segment, besides characterizing the segment as voiced, also may serve to a single a tonal or intonational pattern. To be recognizable as a segment, every segment has certain duration in the time domain; at the same time duration may be contrastive. Every segment also has a certain amount of intensity; whatever the acoustic and physiological correlates of stress, they consist in intensifying phonetic factors already present a lesser degree. Furthermore, suprasegmental features differ from segmental features by the fact that suprasegmentals features are established by a comparison of item in sequence, whereas segmental features are identifiable by inspection of the segment itself. For example, the rounding of a vowel in a sequence of rounded vowels can be established for each vowel cannot be established without reference to other vowels that carry relatively stress. Thus, the differences between suprasegmental features and segmental feature are simultaneously differences of kind and difference in degree.

Suprasegmental features relate to sounds at the macro level. Advances in research have developed descriptions of the suprasegmental features of speech extending across whole stretches of language (prosody). Unlike languages such as Vietnamese or Mandarin which are tonal, English is stress-timed and syllable-timed (for example, WHAT's his addRESS?). Jenkins (2002:121) <sup>[4]</sup> emphasizes that effective communicative pronunciation competence can be achieved more through improving suprasegmental production in preference to segmentals. Linking, intonation and stress are important features for effective pronunciation at the suprasegmental level.

### **The Importance of Suprasegmental features**

The sound system of English is studied under two main headings: segmental and suprasegmental. Seferoglu (2005:303–316) <sup>[7]</sup> claims that "Segmental aspects of the sound system include

individual vowels and consonants, and the suprasegmental aspect comprises words, phrases, and sentence stress, pitch contour or intonation, and rhythm. Coniam (2002:30-42)<sup>[2]</sup> confirms that the issue of teaching Suprasegmental features in preference to segmental is debatable. Because segmental phonology is relatively more easily explained and taught than the suprasegmental features, some studies focus on studying segmental phonology in preference to suprasegmental features. However, approaches to pronunciation have shifted in focus away from segmental to suprasegmental aspects of as found system. Recent approaches to teaching pronunciation in computer-based contexts follow the communicative approach in teaching pronunciation.

Harmer (1993)<sup>[3]</sup> stresses that the need for making sure that students can always be understood and say what they want to say. They need to master good pronunciation, not perfect accents. That is, emphasis should be on suprasegmental features of pronunciation—not segmental aspects—to help learners acquire communicative competence. Butt (2005:5) asserts: In recent years, increasing attention has been placed on providing pronunciation instruction that meets the communicative needs of non-native speakers (NNSs) of English. Empirical research and pronunciation materials writers suggest that teaching Suprasegmentals before segmental to intermediate and advanced NNSs could be more beneficial in a shorter period of time".

Seferoglu (2005: 303–316)<sup>[7]</sup> reports that integrating accent reduction software in advanced English language classes at the university level results in improvements in students' pronunciation at the segmental and suprasegmental levels, EFL learners may be provided with exposure and practice/interaction opportunities in the target language through specifically designed software programs. Morle Y. (1991)<sup>[5]</sup> explains that providing detailed attention to suprasegmental features of pronunciation and their function in interactive discourse and stressed their application in communicative approaches to pronunciation learning and teaching. In sum, scholars and educationists mentioned that suprasegmental aspect is more significant than segmental ones. Therefore, the approaches of teaching pronunciation have relocated in concentrating away on segmental to suprasegmental features (phonology). On the other hand, new invented approaches for teaching pronunciation are focusing on computer-based contexts which are subordinate the communicative approach in teaching suprasegmental features, moreover, from the researcher point of view suprasegmental phonology should be taught through audiovisual aids. For this reason, teachers of English should be well-trained in teaching the area of phonology with special reference to suprasegmental aspects.

### Research Methods

Designed papers contain oral test in segmental and suprasegmental which prepared under great care so as to measure students segmental (vowel- consonant) and suprasegmental features ((intonation, stress, rhythm and aspect of connected speech) students is examined to read this designed papers loudly after teaching them, When students is reading, their utterances were recorded by a set of headset and laptop beside a telephone. In other words, each English word or sentence articulated by the students in this examination is recorded. Then, the sound from the participants recording were analyzed one by one to evaluate

whether the sounds are correctly pronounced as well as the Suprasegmental features (intonation, stress, rhythm and so force. Data analysis employs methodological tools appropriate to the study of "spoken records phonetics lab, acoustics analysis, and diagram etc". This research used descriptive qualitative approach which is a way to apply deep understanding aspect to a problem. This study is descriptive and tends to use analysis and see the phenomenon that occurs with the aim of providing a broad and deep understanding a formulation of research problem. The subjects of this study are students who take courses phonetics and phonology. In conducting interviews and data collection, the researcher took 100 samples. In addition, researcher conducted observations, interview and observation to explore sources which are related to teaching suprasegmental (intonation, stress, rhythm and pitch). It is a descriptive since it tries to explain and describe and analyze data, which are displayed in the form of field-notes (observation, interviews, and recording). This study was conducted at Al Kordofan University – faculty of Education – Department of English Language by involving 100 students of the 6<sup>th</sup> semester of English Department to 8<sup>th</sup> semester of the total of 600 students. The 100 students have already been taught the English sound system, particularly segmental phonemes and suprasegmental. However, those students still have problems of the segmental phonemes itself and effect by their use. Therefore, this study tries to find why the students face difficulties to pronounce the segmental phonemes and misuse Suprasegmental features of English phonemes in speaking. In collecting data, the 100 students were examined to read an English text loudly. When each of 100 students was reading, his utterances were recorded by a set of headset and laptop beside a telephone. In other words, each English word or sentence articulated by the students in this examination was recorded. Then, the sound from the participants recording were analyzed one by one to evaluate whether the sounds are correctly pronounced as well as the Suprasegmental features (intonation, stress, rhythm and so force. Data analysis employs methodological tools appropriate to the study of "spoken records phonetics lab, acoustics analysis, and diagram etc".

### Research Procedures and Methods

The objects of this study was to improve students' levels in learning suprasegmental features, action study was selected because it is a kind of practitioner study that, is used to learn and improve classroom practitioner's own teaching activities. it invents the impact of Suprasegmental features on student's English language speaking measuring the aspect of connect speech, intonation, and language tone under designed test. The collaborative study contained three tasks, recording test and Questionnaire besides structured interviews, each of which comprised 2 months to complete. The main learning activities in each task include listening and measured the suprasegmental features through rehearsing voice, sound recording and there is written papers to help learner's memories what to say. Such test is done in calm office to make the recorded test clear besides using telephone to record and computers to analyze this recorded suprasegmental features. Observation taking notes were done by the researcher using checklist. Interview with some English language learners were done through direct dialogue then notes is taken as feedback in structured papers. The methods used in the test were reading many sentence taking the targeted tasks i.e. suprasegmental features. The data was analyzed by using

computer program which is the statistical package for social science - SPSS – version 16, to measure errors and the findings then this analysis outcome is tabulated under which is research conductor comments.

### Data collection

The researcher obtained a permission to conduct the study in the faculty of Education department of English. The study took place in different levels of English language learners of the academic year 2016. The training was lasted for 8 weeks. The primary data was collected from many sources (Library Books, reference, and the internet) while the secondary data was collected from (Questionnaire, Recoding test and observation) the Questionnaire was done carrying Suprasegmental (intonation, rhythm, stress and aspect of connected speech, so as to measure English language learners experience in above subjects as well as to detect errors made by such learners through indicating their degree of agreement or disagreement with each statements with 3 liker scale ranging from agree, disagree, neutral (not sure). The recoding test was as pre-posttest. The participants were asked to pronounce words and sentence in the test aloud while the researcher conductor given scores and decided wither the suprasegmental features; (intonation stress, rhythm and aspect of connected speech) applied and used correctly or not. also has test to measure wither English learners know these features and implemented in their speech or not. Because actually supra-segmental feature inters language theory as main roles in spoken language “change the meaning, change a word classification...etc.)

### The sample

This study used Comprehensive sampling technique in which the English language lecturers is selected in Faculty of Education and the sample size compromises 18 lecturers to answer the questionnaire where 100 students in the department of English at Faculty of Education who were taught supra-segmental programs were selected from population size of 400 students to be given the oral test to measure supra-segmental features (intonation stress, rhythm and aspect of connected speech).

### Data analysis and Discussion

Segmental errors were controlled over the major groups of speakers. Theologically, what was left as different are the Supra-segmental, despite the control, the variation in intelligibility and English learners knowledge as very large. While some speakers get about 93% of their message across, the other group can only get less than 50%. Segmental accuracy seems not to be the primary and scale factor affecting speech intelligibility started some researchers with the unavailable extra-linguistics information in the present study, Supra-segmental then seems to be the contributing factor of the differences in speech intelligibility. The relationships of the two were best shown when combing the results obtained in experiment one and two. In figure 1, it can be seen that there is a positive correlation between intelligibility and Supra-segmental. Higher segmental scores were associated with a higher intelligibility score. In summary, our two parts of analysis in this section have provided evidence in favor of the general hypothesis that listeners of a language will use all available cues for lexical access that usefully serve to distinguish between words of the language in question. If the

language contains pairs of words that differ suprasegmentally but are segmentally identical, then listeners will use suprasegmental information in lexical activation. Moreover, the relative contributions of suprasegmental and of segmental information in the lexical activation process seem quite Equivalent. Similarly, there seems to be no categorical difference in the contribution made by vowels versus consonants, or by single-feature versus multi-feature differences between phonemes. Any incoming speech information that favors one lexical candidate but mismatches a simultaneously active competitor will be equally effective; the competition process is ruthless, and once one word has an advantage it will be able to triumph, regardless of the type of speech information providing the advantage. Finally, the results offer further support for models of spoken-word recognition involving automatic activation of word forms and competition between activated words. The part of Suprasegmental features is measured after course is designed and taught to English learners at Kordofan university faculty of Education. At last, English learners are sat to have a test in segmental features “stress, intonation, pitch and rhythm”.

### The Analysis of oral test of Suprasegmental features

**Table 1:** Suprasegmental features “Stress, Intonation, Pitch, and Rhythm”.

	Correct	Incorrect	Percentage
Stress	73	27	100
Intonatoin	78	22	100
Pitch	67	33	100
Rythem	62	38	100

The table above No (1) show the suprasegmental features: “Stress, Intonation, Pitch, and Rhythm” and the scores and degree of errors done by students at faculty of education. It shows Interestingly that, 73 % of English learners who were able to pronounce sentences with word carry stress and stress shift such as in the word present. Some of them ignore the stress which can change the classifications of words from noun to verb or else. Whereas 27% pronounce the words incorrect when it inserted in sentences, they were not very exact but felt that “Recording test” was “monotone” or “boring”. The majority of examiners (78%) pronounce words in sentence correctly applying intonation; and know exactly the Units such as clause and sentence often depend on intonation for their spoken identity, and several specific contrasts, such as question/statement, make systematic use of it. whereas the rest of the respondents 22% faced some difficulties in using intonation and applied its function correctly. 67% of learners have a problem in the rise and fall of air "pitch" and they don't applied correctly in their uttering of test given to them such as "it is splendid silence sun" whereas 33% of them hears the acoustic features of the fundamental frequency, formant frequency, intensity and duration in terms of perceptible categories of pitch, quality, loudness and length. not pay attention and identify pitch but not pay attention and identify the pitch. 62% of English language learners know the rhythm is a “noticeable event happening at regular intervals of time and say sentences correctly which suggests that the stressed syllables cannot be pronounced with the same length and time duration as the unstressed syllables. the unstressed syllables tend to be reduced whereas 38% say sentence without recognizing rhythm

which we needs in normal English speech approximately and the different amount of time need in rapid speech. This indicate that, suprasegmental fractures (stress, intonation, rhythm and pitch) need precise teaching for better understanding and learning.

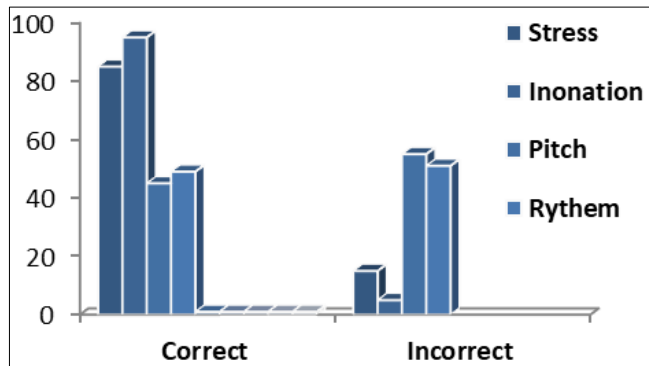


Fig 1: Suprasegmental features "Stress, Intonation, Pitch, Rhythm"

The Analysis of Questionnaire

Table 2: Suprasegmental features have impacts in learning English language speaking.

Options	Frequency	Percentage
Always	58	58%
Usually	16	16%
Sometimes	20	20%
Rarely	5	05%
Never	1	01%
Total	100	100%

The tables (2) above shows that, the majority of English language learners (58%) agreed that suprasegmental features always have impacts in learning English language speaking. Whereas (20%) of the English learners agreed that segmental suprasegmental sometimes have impacts in learning English language speaking. (16%) of the respondents agreed that, suprasegmental features usually have impacts in learning English language speaking and only (5%) of them agreed that they rarely impact.

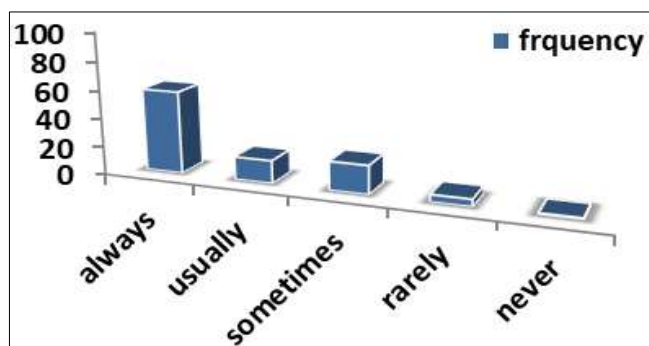


Fig 2: Suprasegmental features have impacts in learning English language speaking.

Table 3: Suprasegmental features of English are as the salient components in mastering English pronunciation.

Options	Frequency	Percentage
Always	40	40%
Usually	22	22%
Sometimes	18	18%
Rarely	18	18%
Never	02	02%
Total	100	100%

The majority in the table above of the English language learners (40%) agreed that suprasegmental features of English are always as the salient components in mastering English pronunciation. Whereas (22%) agreed that suprasegmental features of English are usually as the salient components in mastering English pronunciation. (18%) agreed of the respondents do the same. (18%) agreed that suprasegmental features of English are rarely as the salient components in mastering English pronunciation.

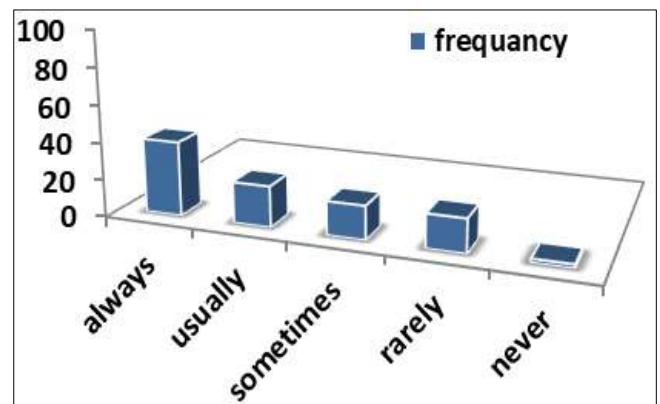


Fig 3: Segmental and suprasegmental phonemes of English are as the salient components in mastering English pronunciation.

Table 4: Learners ignore the suprasegmental features in speaking English language.

Options	Frequency	Percentage
Always	32	32%
Usually	08	08%
Sometimes	20	20%
Rarely	10	10%
Never	20	20%

It is clear from the table above (4.11) that, English language learners (32%) agreed that Learners always ignore the suprasegmental features in speaking English language. Whereas (08%) agreed that Learners usually ignore the suprasegmental features in speaking English language. (20%) agreed that Learners sometimes ignore the suprasegmental features in speaking English language. (10%) agreed that Learners rarely ignore the suprasegmental phonemes in speaking English language.

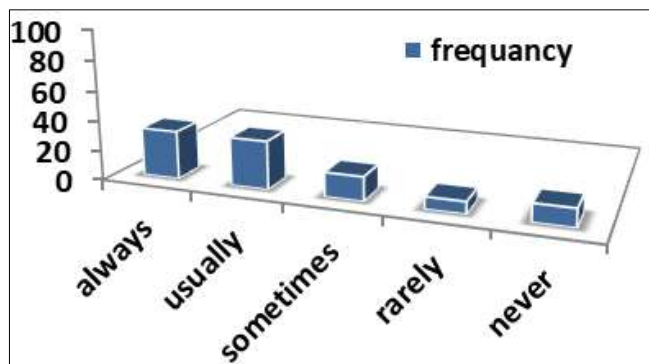


Fig 4: Learners always ignore the suprasegmental phonemes in speaking English language.

Table 5: Acoustic laboratory help English learners to face Suprasegmental features difficulties

Options	Frequency	Percentage
Always	32	32%
Usually	20	20%
Sometimes	32	32%
Rarely	04	04%
Never	12	12%
Total	100	100%

The Table (5) above indicates that, English language learners about (32%) agreed that acoustic laboratory always helps English learners to face Suprasegmental features difficulties. Whereas (20%) agreed that acoustic laboratory usually helps English learners to face Suprasegmental features difficulties. (32) agreed that acoustic laboratory sometimes helps English learners to face Suprasegmental features difficulties. (04) agreed that acoustic laboratory rarely help English learners to face Suprasegmental features difficulties, this indicate that, acoustic laboratory help English learners to face Suprasegmental features difficulties.

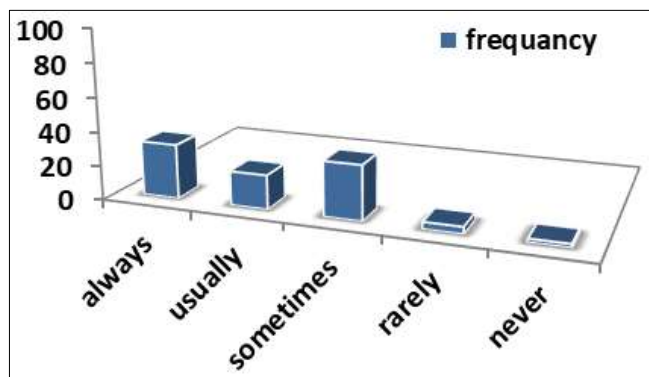


Fig 5: Acoustic laboratory always helps English learners to face Suprasegmental phonemes difficulties

**Results: This study found out the followings**

- In the part of supra- segmental phonemes according to oral test;

- students scored mean percent of 77% in the level of stress, 45% in intonation, 55% in rhythm and 44% in pitch. This indicate that, almost students neglect implementing and using of this feature in their talk, according to mother tongue, this feature is found but it has other grammatical roles and indication. Stresses that the need for making sure that students can always be understood and say what they want to say. They need to master good pronunciation, not perfect accents.
- According to questionnaire analysis;
- Suprasegmental features have impacts in learning English language speaking.
- Suprasegmental features of English are as the salient components in mastering English pronunciation.
- Learners always ignore the suprasegmental phonemes in speaking English language.
- Acoustic laboratory always helps English learners to face Suprasegmental phonemes difficulties

**Recommendations and suggestions**

The study recommended the followings;

- Teachers of English should care enough for suprasegmental features that are important to improve communicative competence yet have so far been neglected.
- English learners should be taught in Acoustic laboratory to face Suprasegmental phonemes difficulties.
- Designing a program containing the Suprasegmental feature to enhance the level of pronunciation.
- Oral communication classes should be encouraged in English teaching program.
- English language learners should be motivated to watch English language programmes on TV or other visual media, such as BBC English, through electronic devices.
- students should be encouraged to use internet to communicate with English native speakers.

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