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- b. **Time:** It is a property of speech sounds reflects the duration of a given sound.
- c. **Amplitude:** The amplitude is marked by darkness of the bands; the greater the intensity of the sound energy presents in a given time and frequency, the darker will be the mark at the corresponding point on the screen.
- d. **Formant:** A formant is a concentration of acoustic energy around a particular frequency in the speech wave. There are several formants, each at a different frequency, roughly one in each 1000Hz band. To put it differently, formants occur at roughly 1000Hz intervals. Each formant corresponds to a resonance in the vocal tract.

From those four acoustics properties of speech sound description therefore in this research, the researcher will use PRAAT software which can present a valid acoustic phonetics analysis. PRAAT is a computer program for analyzing, synthesizing, and manipulating speech. It has been developed since





in the phonetic realization of stress, in particular in lack of vowel reduction in unstressed syllables; this contrasts with minimal errors in word-stress placement.

The third previous study is “*The perception and production of second language stress: a cross-linguistic experimental study*” by Heidi Altmann, University of Delaware. In this study, the researcher investigated the effect of native language (L1) stress properties on the second language (L2) acquisition of primary word stress in light of two recent typological hierarchical models of stress: the Stress Deafness Model (SDM) and the Stress Typology Model (STM). The results indicate that, on the one hand, learners with predictable stress in their L1 (Arabic, Turkish, French) had problems perceiving the location of stress but they performed most like the English native speakers in production, who applied a frequency based common strategy. On the other hand, learners without word-level stress in their L1 (Chinese, Japanese, Korean) or with unpredictable L1 stress (Spanish) showed almost perfect perception scores; however, their productions were quite different from the control group’s. Thus, it was found that good perception does not necessarily underlie good production and vice versa. While the current findings go contrary to predictions made by the SDM, the STM can explain both the perception as well as the production results. Languages with predictable stress, unpredictable stress, and without stress are included in this hierarchical model with branching parameters. It was found that positive parameter settings impede the perception of L2 stress, while the mere setting of



the topmost parameter in the hierarchy ('yes/no stress language') and thus experience with stress in the L1 determines the rate of success in production, although L1s with non-predictable stress face further challenges.

The fourth previous study is "*The Nature of Stress in English Language; A Study from a Perspective of Rule-Governed Approach*" written by Sardar Fayyaz ul Hassan. This study aims is to focus on the stress pattern in English Language (EL). This research is an endeavor to look at this complex phenomenon in detail. It does describe the stress placement rules both, at the word and the sentence levels. It gives information about the placement of stress in content and function words.

The fifth previous study is "*The Role of Explicit Instruction in English Word Stress Patterns in an EFL Arab University Context*" written by M. Mosheer Amer & Walid M. Amer Department of English at the Islamic University of Gaza. In this study, the researcher tried to do an investigation into the extent to which explicit instruction in English word stress patterns correlates with better word stress assignment performance by Palestinian EFL university students and the finding of data analyzed indicate that explicit instruction in word stress patterns is pedagogically advantageous since it has a direct impact on students' ability to place stress correctly in a word.

The sixth previous study is “*Catalan speakers’ perception of word stress in unaccented contexts*” written by Marta Ortega-Llebaria, University of Texas-Austin (UT). This study is intended to examine the perception of word stress by speakers of Central Catalan, in which, due to its vowel reduction patterns, words either alternate stressed open vowels with unstressed mid-central vowels as in English or contain no vowel quality cues to stress, as in Spanish and the result showed that Catalan agree with research in other languages that shows that listeners perceive word stress in the absence of pitch accents by relying on a cluster of cues in which duration plays an important role. They also agree with Lieberman’s finding for English that cues from this cluster trade off, so that in the absence of one cue, speakers rely on others. For example, our results show that in the absence of pitch accents, duration, and vowel reduction cues, listeners perceive stress by relying on overall intensity or in the absence of pitch accents; overall intensity, and vowel reduction, speakers rely on duration cues.

Those differences of earlier studies with this thesis is that this research about the students’ word stress performance and aim to describe any students’ word stress performance and to obtain the common types of word stress performance produced by students. Some previous studies above did a research about the students’ word stress acquisition in optimality theory. The other study simply comparing the students L1 and the English stress. The other studies analyzed the students’ perspective on English word stress and the last thesis

focused on the role of explicit instruction of English word stress. From those previous studies, it showed a fact that most of English word stress researcher is foreigners and Indonesian still have limited research on it.

After knew those significant differences of previous studies, it shows that these previous studies are different from this research, although the focus is almost the same at word stress analysis, but this research will be intended to describe on specific pattern of (primary) word stress more and specified on the three part of speech and (verbs, nouns and adjectives) with not more than four syllables on students' speaking performance at fourth semester of English education department UIN Sunan Ampel Surabaya. It is an endeavor to find out any word stress performance produced by students of English education department. By this research the researcher believe that it can give many advantages for both lecturers and learners to be aware of word stress placement that may change the part of speech of a word and of course may also affect on the spoken message.