

# Paralinguistic Features in Students' Speaking Performance

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**Abstract.** Analyzing paralanguage in students' speaking is important especially in the EFL (English as a Foreign Language) context. The research aims to find out the students' productions of the paralinguistic features that is pitch and intonation in their speaking performance. The researcher used qualitative research and the data were taken from the eight videos of the speaking project of the students of the English department, Universitas Sumatera Utara. The interpretation of the data showed that each student uses the same feature in their speakings but produced the feature in a different way. The research revealed by seeing their paralinguistic features productions by using an instrument, PRAAT. The researcher found that some students produced low pitches in their speaking and some are high. There was a significant difference between men and women speakers in producing pitch. The research showed that PRAAT can help to reveal that both the students and the lecturer of speaking need to give more attention to the paralinguistic features and the production to build a good speaking and to be able to produce and follow the norms and rules in language they are learning.

**Keywords:** *Nonverbal communication; PRAAT; Paralinguistic features and production; Speaking.*

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## 1. Introduction

There are two ways of communication that people usually use, verbal communication and nonverbal communication. Verbal communication is concerned with the spoken language to convey messages and nonverbal communication is the use of facial language, body movement, tone of voice, gestures, eye contact, and so on in conveying their thoughts. Non-verbal communication designates all the kinds of human messages/responses not expressed in words [11]. In a normal two-person conversation, the verbal components carry less than 35 percent of

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the social meaning of the situation and more than 65 percent of the social meaning is carried on the nonverbal level as in [4].

This also cannot be separated from the students' life in the university where they use more communication in their study especially in the EFL ( English as a Foreign Language) context. When they present their assignments or talking in the class they use both verbal and nonverbal communication. The theoretical and research on nonverbal communication can be divided into seven areas, they are 1) kinesics or body motion, 2) physical characteristics (including physique or body shape; general attractiveness; clothing); 3) haptics or touching behavior, 4) paralanguage (including vocal qualities and vocalization); 5) proxemics (the study of the use and perception of social and personal space; 6) artifacts and 7) the environmental factors [14].

In this study, the writer is going to do research, especially about paralanguage. Paralanguage comes along to accompany the speech which is one of important thing in communication. Through paralanguage, people communicate their emotional state, veracity, and sincerity. There are eight paralinguistic features, pitch, tempo, loudness, resonance, timbre, intonation range, syllabic duration, and rhythm. Here, the research scoped to three features to be analyzed by PRAAT they are pitch, loudness, and intonation. Men usually produce lower pitch than women [20]. Then, the researcher will see the production of those features by using PRAAT 6.1.16 version.

The researcher scoped this research only on one feature that is pitch. Pitch is the highness or the lowness of the tone of the voice caused by the faster or slower frequency of vocal band vibrations. Here the researcher will follow the standard pitch by the instrument used by the researcher that is PRAAT. The standard minimum pitch value on PRAAT is 75 Hz for the floor and the maximum or the ceiling pitch is 500 Hz. Intonation range is one of the primary qualities and identified within the speaker's permanent (at least habitual) voice set called intonation range, which is between monotonous and melodious, based on the overall impression of that combination of pitches, so the productions of intonation will be analyzed along with the pitch productions [20].

Learning paralinguistic features can help the learners to avoid miscommunication between the speakers, so that the messages can be delivered as the speakers want. As this research is done in the environment of language learners that is English, paralanguage is important so that the students can speak English upon the rules or norms of the language they are learning. This is also important for language teaching so that the teacher can teach the student how helpful is paralinguistic for the students to produce and speak the language as it to be spoken.

## **2. Research Methods**

The primary data of this research is the sound of the utterances found in the six videos from the final task of the students of English Department, Universitas Sumatera Utara (Indonesia), Speaking II, A-class, the academic year 2019/2020 speaking about “The effects of Covid-19 to environment”. The students are MREA, DS, MDWH, TT, DAFM, and WA. The data will be taken from the component of non verbal communication related to paralanguage and the features expressed by students of the English department in the recorded video and the data obtained will be analyzed and described based on the indication of the three features (pitch, intonation range, and loudness) as in [20] and the average number of the loudness in human voice [10] . This study uses descriptive qualitative research which is an inductive approach and its goal is to gain a deeper understanding of a person’s or group’s experience [25]. In finding the result and the productions, the researcher analyzed per sentence of the speech.

During the research, the values of the feature production will be adjusted to the standard value of PRAAT. For example, for pitch, the standard pitch floor is 75 Hz and the ceiling pitch is 500 Hz. In a qualitative study, analysis involves reducing and organizing the data, synthesizing, searching for significant patterns, and discovering what is important. Here, the researcher must be organized what the researcher has seen, heard, and read and try to make sense of it to create explanations, develop theories, or pose new question [3].

## **3. Results and Discussions**

### **3.1. Result**

There are significant differences in the production of paralinguistic features by the six students. The result also reveals that men and women produce different pitch in their speaking. The analysis shows that the use of the features affects their speaking and shows the tendency in each production. The result of the production of each student will be described below.

#### **3.1.1. Pitch and Intonation Productions analyzed by PRAAT**

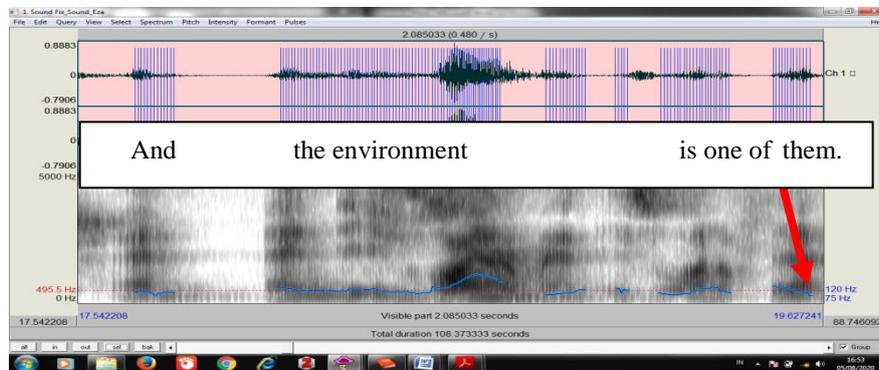
##### **3.1.1.1. Pitch & Intonation Production of M.R.E.A**

M.R.E.A uses different pitch averages in his sentences during his speaking in 1 minute and 44 seconds. There are in total 17 sentences of M.R.E.A analyzed by PRAAT.

**Table 1.** MREA pitch production

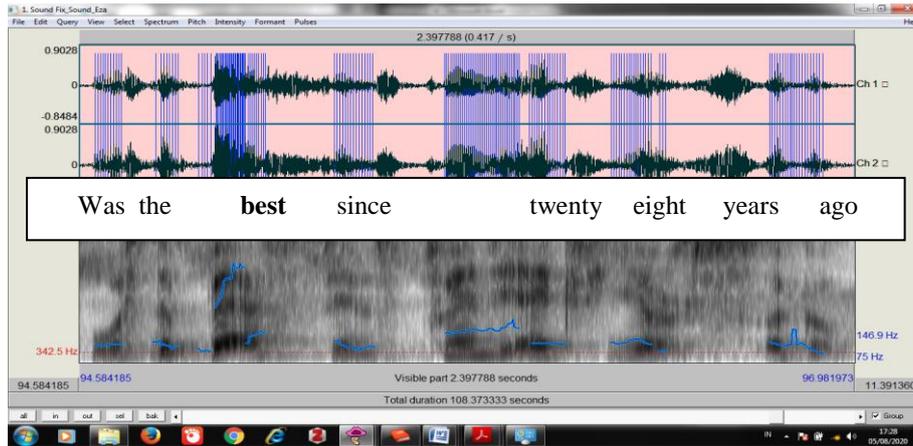
Sentence	Mean Pitch (Hz)	Sentence	Mean Pitch (Hz)
1	123	11	138
2	122	12	138
3	129	13	141
4	140	14	149
5	138	15	135
6	134	16	125
7	138	17	124
8	157	<b>Total mean pitch</b>	<b>2322/17=136,588 ...</b>
9	167		
10	124		

From the table of pitch production by MREA above, the researcher got the mean pitch that is 136 Hz. Besides, when the speaker read the transcription of MREA, he follows the rules in speaking English in general. When it comes to the declarative sentences the speaker always lowers his pitch down like the example below:



**Figure 3.** Falling pitch example in a declarative sentence

As we can see in the figure above, the blue wave on the spectrogram is the pitch produced by the speaker is expressing the sentence “ and the environment is one of them.” As we can see that at the end of the sentence the pitch is falling, marked by the red arrow on the picture and we can see that the pitch almost reach the pitch floor that is 75 Hz. Not only that the speaker also sometimes raises his pitch when he is going to emphasize some words as the point of the sentence he is going to tell. Here below is one of the examples.



**Figure 4.** Example of high pitch when emphasizing word

If we look at the figure above the pitch during 2.3 seconds of speaking is varied by the speaker. The pitch on the sentence is mostly in lower pitch but when the speaker wants to emphasize the word “**best**” in that sentence as it helps the researcher to add power and the listener will know that the word he emphasizes is the point in that sentence. So, the speaker’s tendency to produce lower pitch in his sentences but still follow the norms in his speaking. Besides, from the pitch description we can see that the speaker speaks in melodious way of speaking shows by the pitch waves on the spectrogram.

### 3.1.1.2. Pitch & Intonation Production by D.S

D.S is the second male speaker. During his 5 minutes and 29 seconds of speaking there are in total 27 sentences and from the result of the analysis by PRAAT the speaker uses more low pitch in his speaking. Here is the production of the pitch by D.S.

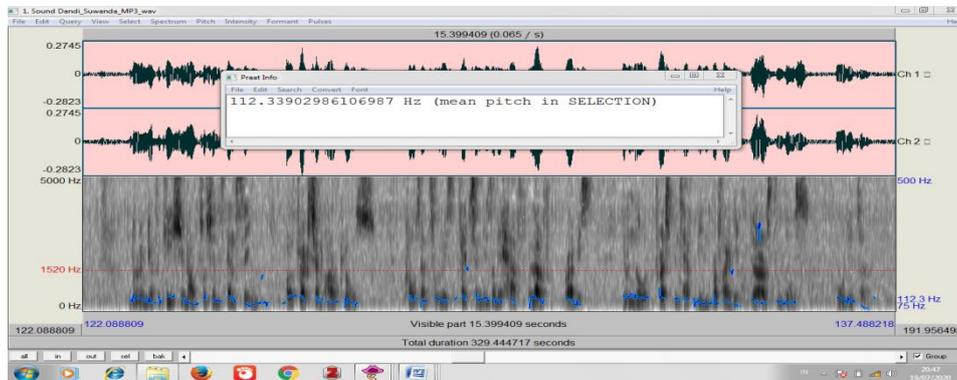
**Table 2.** D.S pitch production

Sentence	Mean pitch (Hz)	Sentence	Mean pitch (Hz)
1	106	15	115
2	114	16	134
3	129	17	118
4	119	18	124
5	118	19	112
6	126	20	113
7	137	21	126
8	124	22	109
9	119	23	105

10	116	24	117
11	110	25	101
12	115	26	95
13	112	27	122
14	126	<b>Total intensity</b>	<b>3162/27=117,111..</b>

The mean pitch of the speaker is 117 Hz. Compared to the standard value of pitch by PRAAT the pitch used by D.S is quite low. Even if we look at the whole sentences' mean pitch all of them are low. Compared to the first speaker above D.S produces low pitches than MREA and even in sentence number 26, D.S gets 95 Hz as his mean pitch which is not very far from the floor pitch that is 75 Hz. If we take a look at the mean pitch he produces in each sentence we can see that the speaker does not really varies his pitch into a very significant higher pitch. For example the sentences from sentence 9 to 13, we can see that the speaker almost uses the same range of pitch, there are no significant changes in those sentences, from 116 then 110, 115 and then 112.

*During the application of social distancing all attraction are closed, crowds at tourist attraction usually have a lot of rubbish even though trash bins have been provided, there are still those who litter.*



**Figure 5. D.S Mean Pitch production by PRAAT**

The tendency of the speaker is to produce a more monotonous way of speaking and lower pitch by seeing his mean pitch from the whole sentences 117 Hz.

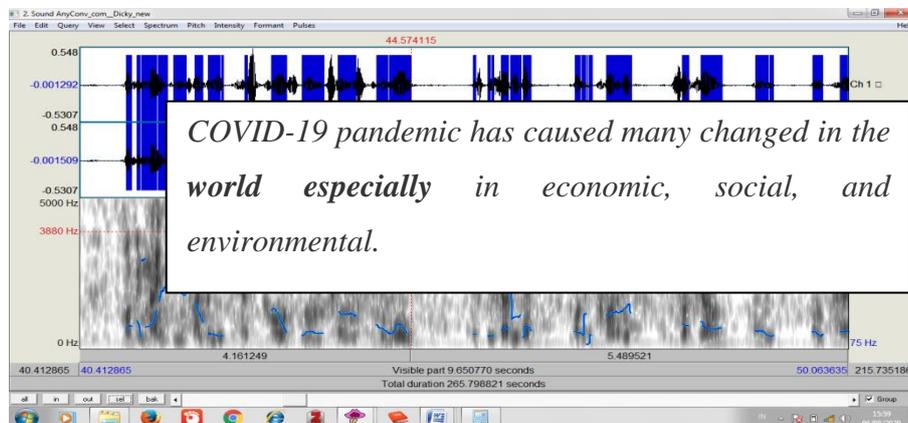
### **3.1.1.3. Pitch & Intonation Production by M.D.W.H**

From the result analyzed by PRAAT the researcher can see that the speaker produces some high and low pitch in his speaking. The changes in his pitch production is also significant.

**Table 3.** M.D.W.H pitch production

Sentence	Mean Pitch (Hz)	Sentence	Mean Pitch (Hz)
1	179	13	167
2	138	14	205
3	144	15	161
4	137	16	171
5	149	17	165
6	154	18	165
7	167	19	130
8	143	20	162
9	174	21	149
10	154	22	153
11	172	23	146
12	160	<b>Total</b>	<b>3645/23=158,4872..</b>

From the table of pitch production by M.D.W.H above, we can see the changes in his pitch production during his speaking. Compared to the two male speakers above, M.D.W.H produces higher pitches, and the pitch he produces also varied sometimes low and sometimes high. The changes in his pitch are also significant according to what he is going to say in that sentence. As we can see in the fourth sentence, we can see that 137 Hz is the lowest mean pitch he produces and in the 14 sentence he hits the highest pitch than others that is 205 Hz and the rest also varies such as 67 Hz, 171Hz, and other numbers. Below, the researcher will put an example of the pitch production by M.D.W.H in his speaking taken from the second of 40.00-50.00 of his speaking.



**Figure 6.** M.D.W.H Mean Pitch production by PRAAT

As we can see in the figure above the speaker sometimes raises his pitch and sometimes lowers it. As the words are printed boldly in the text box in the figure above, the speaker produces higher pitch when pronouncing those words. As the first word the “World” in the sentences produced higher that is 400 Hz since the speaker wants to emphasize that the impact of COVID-9 is affect the “world” and he raises his pitch to give more power to that word. So from the table and the example above we can see that the speaker’s tendency in producing his pitch during the speaking are varied not really low neither too high and the mean intensity is 158 Hz. But compared to those two speakers above, he produces high pitch but compared to the standard pitch value by PRAAT 75-500 the speaker still in a lower pitch. From the description above the researcher can also categorize MDWH as a melodious speaking from the changes in pitches he produces and figure 4.21 is one of the supporter proof that he speaks accompanied by lively kinesics.

#### 3.1.1.4. Pitch & Intonation Production by T.T

T.T is the first female speaker who produces 25 sentences during her speaking in 4 minutes and 25 seconds. Compared to the men above, as female speaker T.T produces some higher pitch and also varies pitch. As the researcher is going to display the pitch production of T.T, the researcher will take the mean pitche of those sentences and display it in the table below.

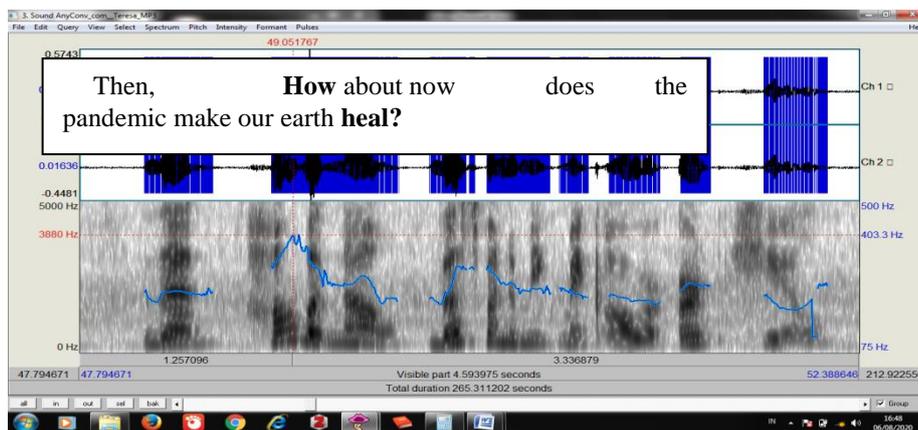
**Table 4.** T.T pitch production

<b>Sentence</b>	<b>Mean Pitch (Hz)</b>	<b>Sentence</b>	<b>Mean Pitch (Hz)</b>
1	230	14	237
2	235	15	245
3	257	16	238
4	243	17	246
5	232	18	227
6	253	19	208
7	241	20	254
8	251	21	237
9	237	22	220
10	239	23	236
11	207	24	226

12	227	25	216
13	221	<b>Total</b>	<b>5863/25=234,52</b>

From the table of the pitch production above, the researcher get the mean pitch of T.T that is 234 Hz which if we compared to the male speakers above we can see that this female mean pitch is higher. We can also see the variation in her pitch production by seeing the changes of the number of her pitch value. From the table above we can also see that none of the sentences' mean pitch lower than 200 Hz. If we look at the pitch description of T.T in the table during her speech it is very rare for her to hit lower pitch because she mostly uses high pitch in her speaking. But even though she always uses a higher pitch, she also follows the norms in speaking English. For example, when it comes to the question sentences, she always lowers her pitch at the end of the question like the example below.

*Then how about now, does pandemic make our earth heal?*



**Figure 7.** T.T Mean Pitch production by PRAAT

In the question sentence above as we can see, the word “How” started with the high pitch like the picture of the pitch on the spectrogram above shows that the word “how” is on 403 Hz, and when it comes to the end the pitch goes down as it is a question. As the researcher has listened to T.T speaking repeatedly the researcher knows this facts of T.T and also by the help of PRAAT. So, from the table and the example above, the researcher and see that the speaker tendency in producing pitch is quite high with the mean pitch of the whole sentences 234 Hz and it is higher than the men’s pitch. From all those descriptions the researcher also finds that the speaker speaks in melodious way by the pitch production. We can see that the speaker significantly changes her pitch according to the words and sentences she expresses.

### 3.1.1.5. Pitch & Intonation by D.A.F.M

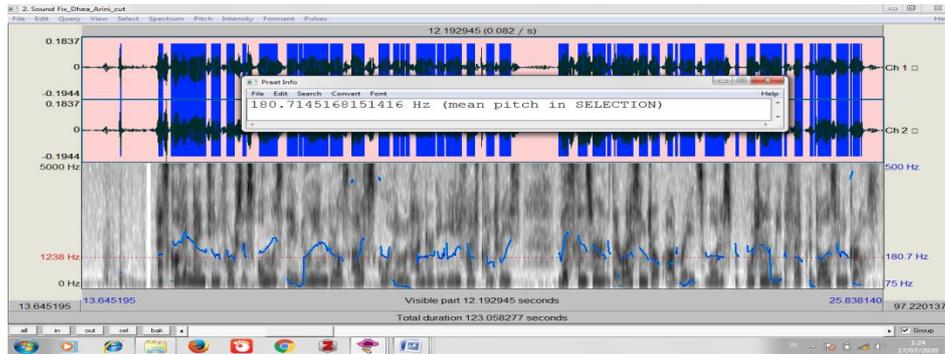
D.A.F.M is the next female speaker. She has 13 sentences during her 2 minutes and 3 seconds of speaking. As the researcher has analyzed her pitch by using PRAAT the researcher can see the tendency in her speaking by counting the whole pitches of each sentences. The speaker as a female speaker does not really produce high pitches like the first female speaker above but still, she varies her pitch and the researcher can also find some significant changes in her pitch. The researcher can also see that the speaker follows the norms in speaking English generally in raising and lowering the pitch. But as we are going to see the tendency in her pitch production, the researcher will put the mean pitches of the sentences on the table below.

**Table 5.** D.A.F.M pitch production

<b>Sentence</b>	<b>Mean Pitch (Hz)</b>
1	197
2	175
3	180
4	180
5	178
6	167
7	166
8	191
9	194
10	180
11	176
12	190
13	179
<b>Total</b>	<b>2347/13= 180, 5384...</b>

From the table above the researcher finds the mean pitch produce by D.A.F.M that is 180 Hz. when listening to her speech, the researcher can hear that the speaker varies her pitch in all her sentences. Even though as a female speaker compared to T.T she produces lower pitches but she still follows the norms in speaking English in general. For example, at the end of the sentences like declarative sentence she lowers her pitch. We can see the example below.

*As Covid-19 forces almost a million girls out of school and one hundred and eighty-five countries, this concern that rising dropout rates will disproportionately affect the dozen girls.*



**Figure 8.** D.A.F.M Mean Pitch production by PRAAT

As we can see from the figure above, the speaker lowers her pitch at the end of her sentence and we can also see the pitch variation in her pitch. So from the pitch intensity in her speech and also the variation in her pitches the researcher can see the tendency in her pitch production that even though her pitch is not as high as the first female speaker she still varies her pitch and compared to the men's pitch, she got a higher pitch. Even though she has a lower pitch compared to T.T but she is categorized into a melodious way of speaking by seeing the description of her pitch production and if we watch the video or listening to her recording we know that she speaks in a melodious way.

### 3.1.1.6. Pitch & Intonation by W.A

W.A is the last female speaker in this research. In her speaking, during 4 minutes and 57 seconds, there are 21 sentences she produces. As a female speaker, W.A produces some significant changes in her speech. There are some sentences expressed lower-pitched and some of them are high-pitched it can be seen from the mean pitch of the sentences analyzed by PRAAT. But because the researcher wants to see the pitch and intonation production of the whole speech, the mean pitch of all the sentences will be put on the table below.

**Table 6.** Table of W.A pitch production

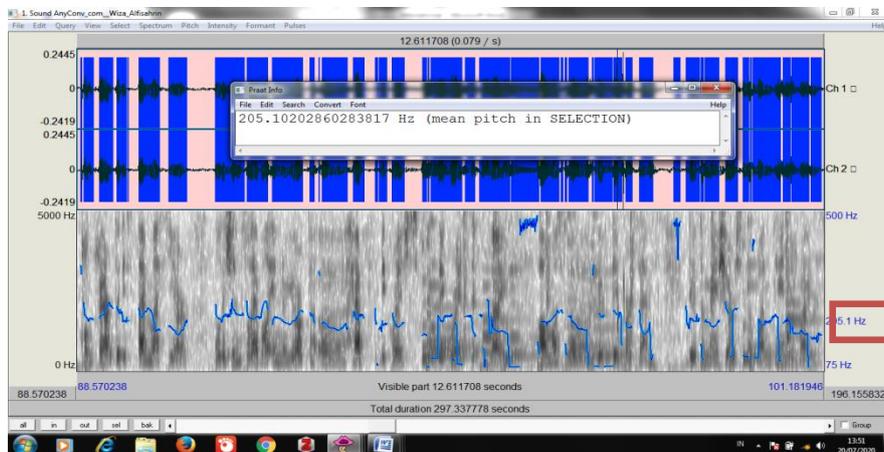
Sentence	Mean Pitch (Hz)	Sentence	Mean Pitch (Hz)
1	195	13	219
2	199	14	232
3	188	15	190

4	228	16	224
5	203	17	205
6	216	18	206
7	195	19	211
8	205	20	220
9	203	21	193
10	201	<b>Total Mean Intensity</b>	<b>4349/21=207,095..</b>
11	202		
12	214		

From the table above, the researcher gets the mean pitch of the speaker that is 207 Hz. if we look at the number of the pitches of each sentence we can see that the speaker sometimes produces some significant changes in her mean pitch but sometimes she got almost the same mean pitch in her sentences such as the sentence number 8-11 the speaker produces mean pitch from 205Hz,203Hz, 201Hz, and 202 Hz. Besides she produces some significant change to the next sentences and as we can see her mean pitch from all the sentences is quite high compared to D.A.F.M and with T.T they are in the same range more than 200 Hz.

From those pitch production list the researcher can categorized W.A as a melodious speaker. Below, we can see the example of a sentence and its pitch description on the spectrogram by PRAAT. This sentence is produced for 12 seconds and we can see how she uses varies pitch in her speaking.

*Compared to this time last year pollutions level in New York, have decreased decreased by almost 50 percent due to measures to contain the virus.*



**Figure 8.** WA Pitch production by PRAAT

As we can see in the figure above, the speaker varies her pitch in the sentence she expresses. The mean pitch in this sentence is 205Hz but as we can see the blue waves on the spectrogram shows the variation of the line there, some of them are higher than 205 Hz and some even hit the floor pitch, 75 Hz. As we can see also the sentence above is a declarative sentence and the spectrogram shows that the pitch is lowered at the end of the sentence and it shows that the speaker follow the norms of speaking English in general and for the rest of the sentences we can see the same thing used by the speaker. So, from these descriptions, the researcher can see the tendency of the use of pitch by the speaker that is quite high and compare to men as a female speaker she produces higher pitch and it can also be categorized as a melodious way of speaking supported by the figure 4.29 above that the speaker also always accompanied by some lively kinesics such as hands movements, eye contact or body gesture.

Based on the result of the pitch and intonation production by the six students above, the researcher can see the tendency of the use of their pitch and intonation. Some of them produce higher pitch and speak in a melodious way and some produce lower pitch and some speaking monotonous way. When someone speaks in low pitch it can be interpreted as boredom, sadness, and pleasantness. [14] If look at the pitch production of the students above, it proves that the male speakers produce lower pitch than the female speakers. One of them who produces the lowest pitch is D.S. if we look at the pitches he produces and his intonation and the kinesics as well we can see the boredom in his speaking. Similar to the intonation [14] monotonous way of speaking (atonal) described someone's disgust while melodious ( tonal- major) describe someone's happiness and pleasantness. For example, in this research the students who speak in melodious way such as MDWH we can see the enthusiasm/happiness when he is speaking. This applied to the other students as well.

#### **4. Discussion**

From the six speakers from students of the English Department, Universitas Sumatera Utara analyzed by PRAAT, the researcher can see that there are some differences of using nonverbal communication especially pitch as one of the paralinguistic features that support their speaking. All the speakers have their own way in using the features and it can be seen clearly from the use or the production of the feature in their speaking. Specially for men and women, as in [20] says that men produce lower pitch than women.

In analyzing the paralinguistic feature by using PRAAT, the researcher can see the difference in the use of the feature by the speakers. For example, the first speaker M.R.E.A uses a more varies pitch than the second speaker D.S and it can be seen from their production of the mean pitch in each of their sentences. There are three male speakers and three female speakers in this

research and the researcher found that these three male speakers use lower pitches in their speaking than the female speakers. As the theory above argues the same thing so the researcher agrees with the theory based on the result of this research. As it has been analyzed above, the pitch of male speakers is MREA with 136 Hz, DS is 117Hz, and MDWH is 158 Hz while the pitch of the female speakers are, T.T is 234 Hz, DAFM is 214 Hz, and WA is 207 Hz. and from those findings, the researcher also sees that among the male speakers also there is the difference of pitch production such as MDWH has higher pitch production than the two male speakers. For the female speakers, T.T has the highest pitch production than the two female speakers.

Since pitch is also related to intonation in speaking, the speakers need to follow the rule or the norms of the language they are using. For example in English, if it a declarative sentence, we can not raise our pitch in the end, or using a high pitch along with the sentence we are saying but lower them in the end. When we are using question words, 5W+H, the pitch at the end should be a falling pitch. In this research, most of the speakers follow the norms and rules. For example, it can be seen clearly in TT speaking. When emphasizing words, she raises her pitch, lowering the pitch in the question words and ending the declarative sentence in lower pitch also. So, when the researcher listening to her speech, it is very clear.

Thus, from the result of the analysis of this research, the writer finds that paralinguistic as nonverbal communication give a big impact on our speaking, especially for us, as language learners. Using the right paralinguistic features especially pitch will bring harmonization in our speaking and the communication between the speaker and the listener will turn to successful communication. We can emphasize our meaning through the use of our pitch and by following the right pitch we can deliver our message and can be perceived by the listeners as what we intend to.

## **5. Conclusions**

Based on the analysis of the research about paralinguistic features used by the students of the English Department, Universitas Sumatera Utara, the researcher concludes that in communication, especially speaking, nonverbal communication has a bigger role than verbal. As one of nonverbal communication, paralinguistic can not be separated from verbal communication as it deals with the sounds produced by the speaker when she/ he speaks. In speaking, the speaker uses important features in paralinguistic. When the speakers used the feature (pitch) in the right way or as the norms in speaking the communication will be successful because both the speaker and the listener will understand each other.

The production of the paralinguistic feature mostly different for each student because they have their way in using the feature. However, the six speakers sometimes has some similarities with other students. The three male speakers produced lower pitch than female speakers. Most of the speakers speak in a melodious way. For D.S, because he tends to produce a monotonous pitch and tone in his speaking and there is no lively kinesics during his speaking. The production of the loudness is also different. The last, using PRAAT in paralanguage research is really helpful because it shows the productions of the features of each student clearly. For future research, it is expected to do research of the rest features and to explore more about using PRAAT in paralinguistic research.

## REFERENCES

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- [1] Ahlam, G., & Abdolreza, P. (2015). The Effect of Explicit Teaching Paralinguistics Features on Iranian EFL Learners' Performance in English Conversation in EFL context. *International Journal of Language Teaching*, volume 3.
- [2] Alastair, P. (1985). *Actions Speak Louder Than Words: Paralanguage, Communication, and Education*.
- [3] Ary, D., Jacob, L. C., Razavieh, A., & Sorensen, C. (2010). *Introduction to Research in Education* (8th Ed.). Wadsworth: Nelson Education, Ltd.
- [4] Ary, D., Jacob, L. C., Razavieh, A., & Sorensen, C. (2010). *Introduction to Research in Education* (8th Ed.). Wadsworth: Nelson Education, Ltd.
- [5] Bancroft, W.J. (1999). *Suggestopedia and Language Acquisition*. Gordon and Breach.
- [6] Ernest, B. G., & Nancy, B.C. (1986). *Speech communication: A basic approach (4th ed.)*. Harper & Row.
- [7] Byrne. (1984). *Teaching oral English*. New Jersey: Longman Group Ltd.
- [8] Crystal, D. (1966). *The linguistic status of prosodic and paralinguistic features*. *Proceedings of the University of Newcastle-upon Tyne Philosophical Society* 1, 93–108.
- [9] Fraenkel, J.R. Wallen, N.E. (2009). *How to Design and Evaluate Research in Education (7th Ed.)*. New York: MCGraw-Hill Companies Inc.
- [10] Fraenkel, J.R. & Wallen, N.E. (2011). *How to Design and Evaluate Research in Education (8th Ed.)*. New York: McGraw-Hill.
- [11] Teri, K. G., & Michael, G. (2017). *Nonverbal messages tell more; A practical guide to nonverbal communication*. Routledge.
- [12] Teri, K. G., & Michael, G. (2005). *Communication works*. Philip McGraw Hill.
- [13] Immy, H. (1997). *Basic concepts of qualitative research* (1st ed.). Blackwell Science
- [14] Pelin, I. (2017). Paralinguistics in spoken English: Investigating the use of proxemics and kinesics in an efl context. *International Journal of Language* volume 9. doi:10.5296/ijl.v9i3.11178

- [15] Mark, L. K., (1992). *Nonverbal Communication in Human Interaction*.(3rd ed). Ted Buchholz.
- [16] Mark, L. K., (1978). *Nonverbal communication in human interaction*. Holt; Rinehart and Winston.
- [17] Miles, M.B, Huberman, A.M, and Saldana, J. 2014. *Qualitative data analysis, a methods sourcebook*, Edition 3. USA: Sage Publications.
- [18] Rahman, M. H. (2018). Paralinguistics features in tesol- an action based approach. *International journal of current research, volume 10*. DOI: <https://doi.org/10.24941/ijcr.32499.10.2018>
- [19] Pearson, et al. 2011. *Human communication*.(4th ed.). McGraw Hill.
- [20] Peter, A. (1999). *Nonverbal communication: Forms and Functions* Mountain View, CA: Mayfield
- [21] Fernando, P. (2002). *Nonverbal communication across Disciplines: Paralanguage, kinesics, silence, personal and environmental interaction*. (2nd ed.). John Benjamin Publishing company.
- [22] Kang, Q. (2013). Paralanguage. *Canadian Social Science, volume 9*. doi:10.5296/ijl.v9i3.11178
- [23] Rosdiana, S. 2012. *The analysis of paralinguistic features in twitter text*. Surakarta: S-1 Thesis, English Department, Universitas Sebelas Maret.
- [24] Stewart, L. T., ( 2003). *Human Communication; principles and contexts*. McGraw Hill.
- [25] Vanderstoep, S.W. and Johnston, D. (2009). *Research methods for everyday Life: Blending qualitative and quantitative approaches*. Jossey-Bass.