RESEARCH SUMMARY

ASSESSING ENGLISH PRONUNCIATION PROFICIENCY OF L2 STUDENTS

USING WHATSAPP MESSENGER

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ABSTRACT

Learning autonomy is supported by information technology especially on the use of social media such as Whatsapp (WA) Messenger. This study examines the use of WA by examining the way L2 students' perform their English pronunciation assessed by the quiz chat using Whatsapp Messenger compared to those assessed using conventional quiz. In addition, it also investigates the occurring mispronunciation in both quizzes.

The present study employs comparative-descriptive design conducted with 80 Indonesian undergraduate students taking English. The instrument used is quiz consisting of two sets each of which has five questions.

The finding shows that by using WA messenger, the students pronounced more correct words in introducing oneself. In terms of listening comprehension WA group also shows the lessening pressure as the speakers do not have to worry about facing the examiner which may cause more hesitation. Similarly, the reading aloud task also shows that WA gives more opportunity to support the learner's autonomous learning to improve their pronunciation skill. Meanwhile the minimal pairs task becomes the hardest challenge as the students in both groups. In addition, WA group has fewer identified errors and mispronounciation in introducing oneself and reading aloud. In the listening comprehension, the mispronounciation is affected by the students' first language. Whereas, the highest difficulty occurs in pronuncing minimal pairs.

Keywords: pronunciation proficiency, assessment, WA messenger

CHAPTER I

INTRODUCTION

The teaching of pronunciation today has been changing in line with different perception toward the nature of pronunciation. Pronunciation is a subskill which is often neglected as the the emphasis is on the comunicativeness of the utterance. Supporting this perception, Krashen (1982) argues that pronunciation is acquired rather than learned. This can lead to the assumption that the teaching of pronunciation designed to promote accurate pronunciation was at best useless and worst detrimental. However, there is an increased interest in teaching pronunciation which has increased a number of effective strategies of teaching pronunciation today in communicative classrooms (Muller, 2013). The effectiveness of the strategies needs a good assessment as well. The assessment offered in this study is on the use of Whatsapp Messenger.

Whatsapp Messenger is one of the chat tool used provided by instant messaging service that uses internet for communication. In addition to text messages, users can exchange image, audio, video, web links or files. Started since 2009, Whatsapp has over 500 million of active users using the messenger tool for various purposes. One of the possible purpose is to use it as a medium of assessment in the teaching and learning of pronunciation practice. The features provided enable the users to send audio text or passages and record their voice. These can be useful as the assessment tool of pronunciation which can improve the dynamic of the teaching pronunciation.

Regarding the dynamic of the teaching of pronunciation, Muller (2013) identifies different research emphasis. Current researches on pronunciation deal with more quantitative empirical findings on learners' development rather than exploring how pronunciation is closely related to highly individualized nature of learning process. Therefore, pronunciation needs to be conceptualized as strongly relevant with learner's different disposition which requires learners' autonomous learning skill to develop her or his pronunciation proficiency.

Learning autonomy is supported by information technology especially on the use of social media such as Whatsapp Messenger. Whatsapp Messenger is completed with the features of audio record which can be used for learning how to produce correct pronunciation as well as evaluating the pronunciation proficiency. The evaluation can be used not only by the hearer but also the speaker himself. Therefore it enables the practice of self-assessment which can be regarded as one of the implementations of learning autonomy. In pronunciation, self-assessment is needed to encourage the learning motivation in the context of English as second language (L2).

A. Research Question

In an attempt to encourage L2 students apply their pronounciation skill, this study was guided by the following research question:

1. How is L2 students' English pronunciation assessed by the quiz chat using Whatsapp Messenger compared to those assessed using conventional quiz?"
2. How is L2 students' English mispronunciation occurring in the quiz chat using Whatsapp Messenger compared to those occurring in conventional quiz?"

B. Research Objective

Based on the aforementioned research background deciphering the bases of this study relating with the urgency of assessing students' English pronunciation, the main goal of this study is to explore the benefits and shotcomings of Whatsapp Messenger as an assessment medium. As the delimination of the analysis, there are three objectives formulated to do this research.

First, this study is to explain the use of Whatsapp Messenger in assessing English department students' pronunciation especially in four aspects as follow: (1) introducing oneself which include the ability to express oneself and give brief explanation on his or her identity using correct English pronunciation and appropriate

expressions; (2) expressing the skill of listening comprehension by using well pronunced answer; (3) reading aloud a given passage in good pronunciation; (4) distinguishing sounds production of minimal pairs; and (5) the ability to self assess students' pronunciation proficiency.

Second, the analysis is done to see whether the mispronunciations occurring in the quiz using Whatsapp Messenger is different from those in conventional pronunciation quiz.

C. Research Significance

Based on the background explained above and the research objectives as mentioned earlier, the starting point of this study is to portray the students' pronunciation proficiency assessed through Whatsapp Messenger. The finding is contributed to the area of English language teaching which explores an alternative assessment media by seeing the benefits as well as the shortcomings compared to the conventional pronunciation quiz. The description will be the empirical bases which can contribute to the further aspects relating to EFL teaching and learning process.

To understand the result of the assessment on students' pronunciation proficiency is important given that the pronunciation skill is becoming significant as the quality of English department graduates also concerns with how well the students produces correct English pronunciation. By reaching to an explanatory level, this study will be significant for finding more various construct of English language evaluation. An ideal English language course should also lead to a better autonomous learner who can develop and monitor his or her own learning progress which is offered through the use of Whatsapp Messenger.

The result of this study also brings important institutional and pedagogical contributions. Institutionally, understanding the pronunciation proficiency of the students is an important step to develop teaching syllabus, material and evaluation method in the teaching of English language which emphasize on guiding students' autonomous learning to develop their pronunciation proficiency. The better autonomous learning skill will result in the better pedagogical implication. It

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means that the more students aware of how to make use of the available application in their gadget the more effective the English learning not only in the class but also outside of the classroom setting.

CHAPTER III

RESEARCH METHOD

A. Research Design

The present study employs comparative-descriptive design by identifying the pronunciation performance assessed using Whatsapp Messenger and conventional pronunciation quiz. It is followed by the exploration of the real pronunciation practices to see the variation occuring. In quantitative work, the intent is to explore the similarities and differences of the result between the two assessment tools.

This study was conducted with Indonesian undergraduate students taking English as their major. The participants were young adults with an average age of 20 and had intermediate level of English proficiency. The students were grouped into Whatsapp quiz as the experiment group and conventional quiz as the control group. The Whatsapp quiz group had short tutorial preceding the online assessment process. While the conventional quiz got one-on-one pronunciation quiz.

The instrument used is quiz consisting of two sets given to both Whatsapp quiz group and conventional quiz group. The first quiz set is on agriculture report and the second quiz set is on the statue of Liberty. Each set has five questions. Question one is about introduction, question two and three are based on the audio text taken from VOA Special English. Question four is about pronunciation practice at minimum pairs. Question five is on self-assessment.

B. Population and Sample

The target population of the study is English Department students. The accessible population is the students of English Department at Humanities and Culture Faculties of Maulana Malik Ibrahim State Islamic University/*Universitas Islam Negeri Maulana Malik Ibrahim (UIN Maliki)*. The students have passed English Intensive Course as the requirement. By doing so, it is expected that the students will have no problem relating to understanding the instruction in the quiz. In the preliminary study, a survey was conducted to identify the number of the students who have been using Whatsapp Messenger. Because the application needed to be suported by android handphone or tablets or PC, the survey is useful to make sure that participants are familiar with the chat tool. All of the students using Whatsapp Messenger are taken as the accessible population as the experiment group, therefore there is no sampling technique applied. There were 40 active Whatsapp users. The control group consists of the students who volunteraly involved in the research. The total number of students involved in this study is 80.

C. Research Instrument

The data needed for revealing the performance of pronunciation practice are in the form of the recorded voice. Therefore, the instrument used in this study is the question set which is validated before implemented in the experiment.

The question set is developed by determining the appropriate type of instruction to reveal the students performance in English pronunciation. Therefore the question set given is in the form of integrated quiz which includes listening comprehension, speaking skill, pronunciation mastery and self assessment skill. There are four questions covering the following aspects:

Question 1 is about yourself.

Question 2 and 3 are based on the audio text.

Question 4 is about pronunciation practice at minimum pairs.

Question 5 is on self-assessment.

There are two sets given to the partcipants at random. It means each participant takes one among the two sets. The audiotext given in the first set is on "Agriculture Report" and "The Statue of Liberty" is in another set. The choice of the topic is made based on the same level of difficulty within the same length and reading speed. Both are taken from VOA Special English.

The question sets are validated to an expert from Deakin University. Based on the review, some changing was made on the wording of the instruction and variation of the minimal pairs. The final result of the question set is provided in the appendix.

D. Data Collection

As stated formerly the design of this research is quantitative therefore the question set is used as the main instrument. The data collection starts with short tutorial for the experiment group. In the experiment group the quiz is started on the agreed time. When the participant is ready he/she will be sent the quiestion set online. Meanwhile, those in the control group do not have tutorial. The instruction is explained right before the quiz. Similarly, the quiz is given during the agreed time.

The data needed is in the form of recorder voice in both groups. The voice are then transcribed using the symbol for transcription as seen in the appendix. The transcribed data are then ready to be analyzed.

E. Data Analysis

The first stage of the analysis is on putting the data into separate aspect based on the assessed pronunciation skill. This process is needed to answer the first research question on the assessed pronuciation proficiency using Whatapp Messenger. On the skill to express oneself, the data are put into table 1. It is done to compare those produced in whatsapp and conventional groups.

Table 1. Data on introducing oneself

Subject	Utterances	Identified mispronunciation & error(s)	Conversational Feature	Number of correct & effective words
Whatspp quiz group				
1. ...				
2. ...				
n. ...				
Conventional quiz group				
1. ...				
3. ...				
n. ...				

On the ability to produce utterances with correct pronunciation based on listening comprehension, the data are put in table 2. The data are presented separately between whatsapp quiz and conventional quiz groups.

Table 2. Data on listening comprehension

Subject	Utterances	Incorrect answer	Identified Mispronunciation & error(s)	Conversational Feature

Whatsapp quiz group				
1.				
2.				
n.				
Conventional quiz group				
1. ...				
3.				
n.				

The pronunciation assessed through reading aloud task is put in the following table which is also applied to the data on pronuncing minimal pairs. The list of the identified mispronunciation is used to compare those produced in whatsapp and conventional groups.

Table 3. Data on reading aloud

Subject	Identified mispronunciation
Whatsapp quiz group	
1. ...	
2. ...	
n. ...	
Conventional quiz group	
1. ...	
2. ...	
n. ...	

Table 4. Data on pronuncing minimal pairs

Subject	Identified mispronunciation

Whatsapp quiz group	
1. ...	
2. ...	
n. ...	
Conventional quiz group	
1. ...	
2. ...	
n. ...	

The data as listed in the tables above are summarized and quantified in table 5.

Table 5. Data on total mispronunciation

Subject	Introducing oneself			Listening comprehension		Reading aloud	Pronouncing MP	Total mispron
	Σ Correct	Mis pron.	Error	Mispron.	Incorrect	Mispron.	Mispron.	
Whatsapp quiz group								
1. ...								
2. ...								
n. ...								
Conventional quiz group								
1. ...								
2. ...								
n. ...								

The data are then processed to find the mean to be compared. This is done to find any difference between the experiment and control groups. There are some

computation done on the mean difference between both groups to get the result on the following aspects:

1. Comparing the means on the number of correct words in introduction
2. Comparing the means on the number of mispronounced words in introduction
3. Comparing the means on the mispronounced words in listening comprehension
4. Comparing the means on the mispronounced words in reading aloud
5. Comparing the means on the mispronounced words in pronouncing minimal pairs

The results of each computation above are presented in Table 6.

Table 6. Comparing the means of Whatsapp and Conventional Quiz groups

Group	N	Mean	Std. Deviation	Std. Error Mean
WA	40			
CQ	40			

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed									
Equal variances not assumed									

The findings from the answers of the three research questions above are then discussed further which is followed by drawing conclusion as the final result.

CHAPTER IV

FINDINGS AND DISCUSSION

A. Findings

The data consisting of 80 subjects are analyzed in terms of the pronunciation and the identified error which includes the incorrect answers and mispronunced words. The following part discusses each of the analysis based on the research problems.

1. The Pronunciation Proficiency of L2 Students

The analysis concerning the pronunciation proficiency covers the assessment on the ability to introduce oneself with correct pronunciation (see Table 1 in Appendix); the ability to pronunce correctly the answers of listening comprehension task (see Table 2 in Appendix); the ability to read aloud with the correct pronunciation (see Table 3 in Appendix); and the ability to pronunce correctly the minimal pairs given (see Table 4 in Appendix).

a. Introducing Oneself

On the ability of introducing oneself the data show that the students in both group tend to start their expression with interjection such as *okay, well,* and other expression such as *let me introduce myself.* In the middle of utterance the interjection found is *ya, you know.* Another conversational feature occurs in the data is the use of pauses. The short and medium pauses are frequently found in all of the utterances. Similarly the occurence of filled pauses such as *eh, uh* and *ehm*

are mostly found in the middle of utterances especially when the speakers try to make their expression more meaningful by finding a precise word.

The difference of both groups is shown in the use of repetition, repair and false start. The WA group has 5 repetitions, 5 repairs and 1 false start. Whereas, the conventional quiz group shows 6 repetitions, 6 repairs and no false start. This shows that using WA the students had more opportunity to prepare themselves before executing their utterances.

Meanwhile, in terms of the number of correct words pronunced and the effective words used in the introduction, both groups show difference. This is as shown in Table 7 below.

Table 7. Statistics of number of correct words

Measures	WA quiz group	Conventional quiz group
Mean	21,29	18,27
Median	20,00	16,00
Mode	10,00	13,00
Standard Deviation	9,36	8,24
Variation	87,76	68,00
Maximum score	45,00	40,00
Minimum score	10,00	9,00
Range	35,00	31,00

As shown in Table 7, the WA group has the average effective words 21,29 which is higher than the conventional quiz group 18,27. The range is larger and the variance is higher in WA quiz group which means that the group is more heterogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the higher number of effective words used.

However, the finding cannot warrant that the use of WA quiz is better than conventional quiz because the result of means comparison shows that there is no significant difference between the average number of effective words in WA group and conventional quiz group. The result of T-test for independent sample shows that the significance is .128 (α=95%) referring to the fact that the means of both group are not significantly different. It is due to the fact that the ability of the students in pronuncing correct words in introducing oneself is similar.

b. Listening Comprehension

The ability of answering the listening comprehension question correctly is characterized by the accuracy and the conversational features existing. There are two audio texts used in the quiz, on "The Statue of Liberty" and "Not All Carrots are Orange".

On "the Statue of Liberty" both groups can answer correctly the date of the declaration of independence day of US that is July fourth. The difficulty occurs in pronuncing the year. Instead of stating 1776, the incorrect answers are 1666, 1774, 1778, 1996 or 1997. The first two incorrect answers are stated by the students in WA group while the rest three incorrect answers are stated by those in conventional quiz group. It is obvious that the incorrect answers of the WA group are still closed to the expected one. While, in conventional quiz group the years mentioned do not resemble the expected pronunciation of the year given. There is one student of this group who did not give the answer by just rephrasing the question.

In the second audio texts on agriculture report, the expected answer concerns with carrot and its characteristics. The answers of both groups cover the name of the vegetable root, its form such as the shape, size and color. All of the students in WA group are able to answer the question correctly. While, there are three students of the conventional quiz group who did not give the correct answer. Their response deals with other topic such as how to raise carrot and where to find carrot. Some of them also mentioned its size which is different from the one in the audiotext. One of them mishear the phrase "hot water" instead of the

correct "to hold water". These show that using WA, the students can listen to the audiotext much better as they can replay it several times. While in the conventional quiz the chance given is limited to maximum three times.

Similar to the previous analysis, the hesitation also occurs in answering the listening comprehension question. The short and medium pauses are frequently found in all of the utterances. Similarly the occurence of filled pauses such as *eh, uh* and *ehm* are mostly found in the middle of utterances especially when the speakers try to make their answer accurate by referring to part of the audiotext. They almost never use interjection. Only one student who is from WA group says *well* to begin their utterance. This reflects the easeness to talk through WA compared to talk face to face in conventional quiz group.

The students of WA group had 6 repairs and 2 repetitions. While, the conventional quiz group results in the use of 11 repairs and 4 repetitions which mean higher than the WA group. It shows that through WA there is lessening pressure as the speakers do not have to worry about facing the examiner which may cause more hesitation.

c. Reading Aloud

The ability to read aloud is examined through pronuncing correctly some sentences related to the audio text. The better listening comprehension results in the more accurate pronunciation in the reading aloud task.

On the topic agriculture report, the sentence to read is as the following in which the underlined words belong to the part which mostly pronunced correctly by the student in both groups.

Weather, soil conditions and age will affect the way carrots taste. Experts say warm days, cool nights and a medium soil temperature are the best conditions for growing carrots that taste great.

Among the 27 words, it is obvious that the students in both groups can pronounce correctly 17 words which is equal to 63%.

Meanwhile on the other sentences to read, the students in both group perform differently. As shown in the following sentence, the underlined part belongs to the correct pronounced words.

The Statue of Liberty has stood in New York Harbor for more than 100 years. It was a gift from the people of France in 1884.

Among the 25 words, it is obvious that the students in both groups can pronounce correctly 20 words which is equal to 80%. This percentage is better than the other reading task above.

d. Pronuncing Minimal Pairs

On this part, the ability of the students to distinguish sound is examined through two sets of minimal pairs. In the following minimal pairs, the underlined word refers to the one which can be pronunced correctly by the students of both groups.

BEAN – BIN   BEN – BAN   BUN – BARN

OIL – ALE   ROYCE – RACE   SHEEP – SHIP

Among the 12 words, only one word which is correct. As the correct pronunced word is only 8%, it means that this type of task is difficult for the students.

In another set of minimal pairs, the students show different result. In these set there is no underlined word which means that all of the given words cannot be pronounced correctly by the students of both groups.

PEAK – PICK   PECK – PACK   PUCK – PARK

FOUND – PHONED   ABOUT – A BOAT   HURT - HEART

2. The Identified Errors and Mispronounciation of L2 Students

The identification of the error and mispronounced words is done in each of the task in the following.

a. Introducing Oneself

There are some variations of the identified errors. In both groups, the shared error deals with omission of preposition i.e. *listening music* and omitting direct object i.e. *watching, browzing.* While in the conventional quiz group, the errors consist of wrong preposition i.e. *I live in the street,* word choice i.e. *My hobby is swimmingpool,* word form i.e.. *I'm interesting with...* and subject-verb agreement i.e. *My hobbies is...* It means that the students in conventional quiz group have various type of errors compared to the experimental group.

The identified mispronounced words in both groups concen with the difficulty to pronounce diphtong in some words i.e. *browzing, table* and *don't;* difficulty to distinguisth short and long *i* as in *It, is, in* and *live.* However, on the ability to pronounce words related to introducing oneself, there are identified errors and mispronounced words in both groups as reported in Table 8.

Table 8. Statistics of mispronounced words in introducing oneself

Measures	WA quiz group	Conventional quiz group
Mean	,98	1,32
Median	1,00	1,00
Mode	,00	3,00
Standard Deviation	1,25	1,62
Variation	1,56	2,63
Maximum score	5,00	6,00
Minimum score	0,00	0,00
Range	5,00	6,00

As shown in Table 8, the WA group has the average of mispronunced words ,90 which is lower than the conventional quiz group 1,32. The range is smaller and the variance is lower in WA quiz group which means that the group is more homogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found.

b. Listening Comprehension

The ability to pronounce the answer of the listening task covers two audiotext. On the audiotext "The Statue of Liberty", the mispronounced answer in both group is related with three words, *July* [djul/djuli:]*, united* [junɪtd] and *approv* [əprof]. Whereas, on the second audiotext on agriculture report, the mispronounced words consist of *vegetable* [vedjətæbl] and *raise* [rais]. Meanwhile in both audiotext the more variation of mispronounced words occurs in the conventional quiz group. The words are pronounced similarly to the way it is pronounced in Bahasa Indonesia i.e. *centimeter, characteristics, American,*

final, Belgian, and *imperator.* The difference between the WA group and the conventional quiz groups is in terms of the number of occurrence as shown in Table 9.

Table 9. Statistics of mispronounced words in listening comprehension

Measures	WA quiz group	Conventional quiz group
Mean	1,17	1,55
Median	1,00	1,00
Mode	,00	,00
Standard Deviation	1,32	1,69
Variation	1,74	2,87
Maximum score	5,00	7,00
Minimum score	0,00	0,00
Range	5,00	7,00

As shown in Table 9, the WA group has the average of mispronounced words 1,17 which is lower than the conventional quiz group 1,55. The range is smaller and the variance is lower in WA quiz group which means that the group is more homogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found in listening comprehension task.

c. Reading Aloud

The ability to pronounce the answer of the listening task covers two audiotext. On the audiotext on agriculture report, the mispronounced words in both group consist of *age* [ɪdj/ɛɪg], *affect* [i:fɛk], *warm* [wʌ:m], *medium* [mɛdɪəm/mɛdɪum], *July* [djul/djuli:], *united* [junɪtd] and *approv* [əprof]. In the conventional quiz group the other mispronounced words are *temperature* [tempəratur], *taste* [tes], *weather* [wɪϴr].

Whereas, on the "Statue of Liberty" audiotext, the mispronounced words consist of *Liberty* [lɑibə:ti/libærti]　　[vedjətæbl], statue [steit/statu] and *France* [frʌnʧ]. The difference between the WA group and the conventional quiz groups is in terms of the number of occurrence as shown in Table 10

Table 10. Statistics of mispronounced words in reading aloud

Measures	WA quiz group	Conventional quiz group
Mean	,55	,95
Median	,00	,00
Mode	,00	,00
Standard Deviation	,81	1,28
Variation	,66	1,64
Maximum score	3,00	4,00
Minimum score	0,00	0,00
Range	3,00	4,00

As shown in Table 10, the WA group has the average of mispronunced words ,55 which is lower than the conventional quiz group ,95. The range is

smaller and the variance is lower in WA quiz group which means that the group is more homogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found in reading aloud task.

d. Pronuncing Minimal Pairs

The ability to pronounce the minimal pairs becomes the last task of the quiz. Both groups encounter the difficulty in pronuncing the following minimal pairs:

BUN [bən/bu:n]   –   BARN [bern/bərn]

FOUND [foun]   –   PHONED [pʰon/pʰɔn/fun]

HURT [hʌt]   –   HEART [hərt]

The WA quiz group had common mispronounciation of the following words:

BIN [bi:n]

PICK [peɪk/ pi:k]

A BOAT [ə bu:t]

While, the conventional quiz group had the mispronounced words below:

BAN [bʌn]

BEN [bɪn]

PEAK [peik]

PUCK [pʰuk]

The difference between the WA group and the conventional quiz groups is in terms of the number of occurrence as shown in Table 11

Table 11. Statistics of mispronounced words in pronuncing minimal pairs

Measures	WA quiz group	Conventional quiz group
Mean	1,57	1,55
Median	1,00	1,00
Mode	1,00	1,00
Standard Deviation	1,22	1,58
Variation	1,48	2,51
Maximum score	4,00	6,00
Minimum score	0,00	0,00
Range	4,00	6,00

As shown in Table 11, the WA group has the average of mispronounced words 1,57 which is a little higher than the conventional quiz group 1,55. However, the range is smaller and the variance is lower in WA quiz group which means that the group is more homogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found in pronuncing minimal pairs task.

f. The total mispronounced words

Based on the above analysis, the mispronounced words of each group are counted to see the total number as presented in Table 12.

Table 12. Statistics of total mispronounced words

Measures	WA quiz group	Conventional quiz group
Mean	4,28	5,37
Median	4,00	3,00
Mode	2,00	3,00
Standard Deviation	2,35	4,36
Variation	5,53	19,01
Maximum score	9,00	15,00
Minimum score	0,00	0,00
Range	9,00	15,00

As shown in Table 12, the WA group has the average of mispronounced words 4 which is lower than the conventional quiz group 5. The range is smaller and the variance is lower in WA quiz group which means that the group is more homogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found.

However, the finding cannot warrant that the use of WA quiz is better than conventional quiz because the result of means comparison shows that there is no significant difference between the average number of mispronounced words in WA group and conventional quiz group. The result of T-test for independent sample shows that the significance is .164 (α=95%) referring to the fact that the means of both group are not significantly different. It is due to the fact that the ability of the students in pronuncing correct words in introducing oneself is similar.

B. Discussion

In the above analysis, there are some findings that is elaborated in the following part by confirming with the theoretical framework presented in the previous chapter. The discussion is related with the research problem formulated in this study.

1. The Use of Whatsapp Messenger to Assess L2 Students' Pronunciation.

Based on the findings, the data reveals that students' pronunciation has some different characteristics compared to those involved in the conventional quiz. The identified characteristics are on the number of correct words pronounced and the conversational features involved. As shown in Table 7, the students using Whatsapp Messenger pronounced more correct words compared to those in conventional quiz group. This is because they can have a better preparation before recording their voice. Concerning the conversation feature, the students used less repeated words but more various interjections.

The difference of both groups is shown in the use of repetition, repair and false start. With the less conversational feature in the utterances compared to those in the conventional quiz group, it shows that the students had less hesitation. More hesitation occurs in the natural face-to-face talk like in the conventional quiz. This shows that using WA the students had more opportunity to prepare themselves before executing their utterances. In the task of introducing oneself, the students' utterances present their basic ability of pronuncing simple expression. With the WA feature, the students can make their best preparation to utter the expression with the correct pronunciation.

The fact that face-to-face quiz affects L2 students' pronunciation performance basically deals with the learner variable. Learner variable is an issue

in the teaching and learning of pronunciation. This shows the strong link between the pronunciation performance and personality factor as found by Siahpoosh (2008). The finding of this study is also in line with Busch (1982 in Siahpoosh, 2008) that introverts were significantly bettern than extravert in their pronunciation. Through Whatsapp Messenger the practice of pronunciation assessment can be done as individual activity. Considering that in Indonesia the English learning has similar context to learners of L2 setting, it can be inferred that the personality factor to some extent influences the language performance especially on pronunciation. Therefore, it can be inferred that making use of various facilities for different learner's personality become a significant issue which in this study the use of WA messenger is offered.

The next ability assessed through WA quiz is answering the listening comprehension question correctly which is characterized by the accuracy and the conversational features existing. The finding shows that the students perform differently on the bases of the audiotext given. There are two audio texts used in the quiz, on "The Statue of Liberty" and "Not All Carrots are Orange". The identified error is related with the accuracy of mentioning the detail information stated in the audiotext. The difficulty occurs in pronouncing numbers like year of happening and shape or size of an object.

The analysis also reveals that using WA quiz, the students can give the answer closer to the expected one. While, in the conventional quiz group some students did not give the answer by just rephrasing the question. These show that using WA, the students can listen to the audiotext much better as they can replay it several times. While in the conventional quiz the chance given is limited to maximum three times.

Similar to the occurrence of hesitation in introducing oneself, in answering the listening comprehension question short and medium pauses are frequently found in all of the utterances. Similarly the occurence of filled pauses such as *eh, uh* and *ehm* are mostly found in the middle of utterances especially when the speakers try to make their answer accurate by referring to part of the audiotext. They almost never use interjection. This reflects the easeness to talk through WA compared to talk face to face in conventional quiz group. In addition, the repairs

and repetitions occur in WA group also show the lessening pressure as the speakers do not have to worry about facing the examiner which may cause more hesitation. It reflects another benefit of using WA quiz to assess L2 students' pronunciation performance.

Another way of assessing the pronunciation proficiency is through reading aloud. The ability to read aloud is examined through pronuncing correctly some sentences related to the audio text. The better listening comprehension results in the more accurate pronunciation in the reading aloud task. The audiotext has the similar word count (25-27 words to pronounce). The different topic affects the accuracy as on the topic agriculture report the students can pronounce correctly 63%. Meanwhile on the other sentences to read, the ability reaches 80%. The performance of those in WA group is also better as shown by Table 9.

Through WA the learners have their freedom to play the audiotext several times. It means that the students can apply their autonomous learning. WA gives more opportunity to support the learner's autonomous learning skill which stresses on the process not on product. This is in line with the view of Benson (2001 in Merawati, 2008) where learners only work toward autonomy although they still need guidance from language teachers.

Another ability assessed is on distinguishing sound which is examined through two sets of minimal pairs. In the findings on minimal pairs, the first set of minimal pairs result in 8% accurate pronounciation, it means that this type of task is difficult for the students. Moreover, on the second set of minimal pairs none of the given words can be pronounced correctly by the students of both groups.

As the last question is the self assessment. It is done to check whether the students realize their strength. By having clear goals, students can learn language independently. This is offerred through WA where the students can assess their pronunciation proficiency. When the students' goal is only passing the quiz, they cannot be expected to work autonomously to develop their language performance as supported by Merawati (2008). In this study the performance is assessed dautonomously supported by technology named WA messenger.

2. The Identified Errors and Mispronounciation of L2 Students

There are some variations of the identified errors. In both groups, the shared error deals with omission of preposition and direct object. While in the conventional quiz group, the errors consist of wrong preposition, word choice, word form, and subject-verb agreement. It means that the students in conventional quiz group have various type of errors compared to the experimental group. Once again it is inferred that the best planning affects the number of errors and mispronounciation.

The identified mispronounced words in both groups concen with the difficulty to pronounce diphtong and difficulty to distinguisth short and long *i* especially in the utterance of introducing oneself as reported in Table 8. The WA group has the average of mispronunced words lower than the conventional quiz group which proven to be more heterogeneous in nature. Basically, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found.

The ability to pronounce the answer of the listening task also shows more variation of mispronounced words occurs in the conventional quiz group. The words are pronounced similarly to the way it is pronounced in Bahasa Indonesia. It means that the first language also affect the pronounciation performance. The difference between the WA group and the conventional quiz groups is in terms of the number of occurrence as shown in Table 9.

As shown in Table 10, the WA group has the average of mispronunced words lower than the conventional quiz group in termsof reading aloud. Therefore, it can be inferred that the more time given for the students in WA group to prepare and plan their expression causes the lower number of mispronounced words found in reading aloud task.

Based on the findings, it shows that the highest difficulty occurs in pronouncing minimal pairs. It is supported by the study of Castillo (1990 in Siahpoosh, 2008). Such a drill is needed as it is still significant to develop L2

students' oral proficiency. This is based on the reason that the sound system of the target language and the students' mother tongue can be a factor influencing the communicativeness of the language produced in terms of pronunciation accuracy as found in this study. Indeed, more practise is needed to eliminate the fossilized pronunciation habit which hinder the ability for received pronunciation production. WA messenger that can be used by the students independently provides the chance to improve the pronounciation habit.

However, the above findings cannot warrant that the use of WA quiz is better than conventional quiz because the result of means comparison shows that there is no significant difference between the average number of effective words in WA group and conventional quiz group. The result of T-test for independent sample shows that the significance is .128 (α=95%) referring to the fact that the means of both group are not significantly different. It is due to the fact that the ability of the students in pronuncing correct words in introducing oneself is similar.

In addition, the finding also cannot warrant that the use of WA quiz can eliminate the occurrence of errors and mispronunciation compared to the conventional quiz. This is because the result of means comparison shows that there is no significant difference between the average number of mispronounced words in WA group and conventional quiz group. The result of T-test for independent sample shows that the significance is .164 (α=95%) referring to the fact that the means of both group are not significantly different.

There are some possibilities causing the significant findings in the comparison of the means of both groups. The possible explanation for the insignificant result may be due to the following variables:

1. The size of the sample
2. The amount of instructional time devoted to conduct the quiz
3. The quality of the question set
4. The type of the audiotext given

First, it can be argued that the small size of sample (N=40 students) may not have allowed confidence that the difference between the two groups was real. The

relatively low number of participants in the experimental group limited the ability to generalize the findings of this study. In this case, the findings should be interpreted with caution since the small size of sample becomes an issue here.

Secondly, the amount of instructional time devoted to conduct the quiz is limited. This is due to the fact that the experiment involves a short effect as the period of training is also short. The students need more practice in the training so that they can avoid making errors in the utterance. For instance by asking them to conduct some other strategies for planning their utterance. Therefore the future research should conduct longer time for the training of using WA messenger.

As the third explanation deals with the quality of the question set. The tryout of the question set does not warrant that it would also be well applied in larger sample. This is because the difference might occuring in different group.

The type of the auditext also plays a role. The choice of the audiotext on the difficulty level, the length and the topic become three major reason responsible for figuring out the real pronounciation proficiency of the students. Accordingly, this study suggests that further research set the quality standard for the audiotext used in pronounciation quiz.

Those four variables are all the possible explanation for the insignificant result which need more exploration by other research. More empirical finding is needed to reject the null hypothesis that using WA messenger can be more effective for assessing students' pronunciation proficiency.

As the final inference, in the context of language learning, the type of assessment which is recommended in EFL setting is interactive assessment. In this study the conventional quiz group is also interactive. Applied to assess oral proficiency, this type of assessment required teacher's questions which make increasing cognitive and linguistic demands on the learners. Teacher is encouraged to interact individually with the student at any time, asking specific question(s) to clarify and encourage the student to extend ideas, help prompt and scaffold the student's oral interaction, probe the range and depth of their oral language skills, and verify the student's understanding of what s/he is saying (Davidson & Leung, 2009).

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

In relation to the result and analysis presented in the previous chater, this chapter covers the conclusion and recommendations. The conclusion is drawn based on the result of findings and discussion. Then, the recommendations are made for some parties.

A. Conclusion

By using WA messenger, the students pronounced more correct words compared to those in conventional quiz group. This is because they can have a better preparation before recording their voice. Concerning the conversation feature, the students used less repeated words but more various interjections. In terms of listening comprehension WA group also shows the lessening pressure as the speakers do not have to worry about facing the examiner which may cause more hesitation. It reflects another benefit of using WA quiz to assess L2 students' pronunciation performance. Similarly, the reading aloud task also shows that WA gives more opportunity to support the learner's autonomous learning to improve their pronunciation skill. Meanwhile the minimal pairs task becomes the hardest challenge as the students in both group find it difficult to distinguish the sound.

The findings also show that the students using WA has fewer identified errors and mispronounciation. This occurs in the task of introducing oneself and reading aloud. In the listening comprehension, the mispronounciation is affected by the students' first language. Whereas, in the task of pronuncing minimal pairs

the highest difficulty occurs as the students cannot eliminate the errors since they need further drills.

However, this study results insignificant difference between the average number of both effective words and total mispronunciation in WA group and conventional quiz group. The possibilities causing the insignificant findings cover the size of the sample, the amount of instructional time devoted to conduct the quiz, the quality of the question set and the type of the audiotext given.

B. Recommendations

In light of the finding, some recommendations can be made to the English pronounciation teachers and the future researchers.

For the pronunciation teachers, the findings of this study suggests the type of assessment which is recommended in EFL setting is interactive assessment. It can be done either through WA messenger or face-to-face interactive quiz. Teacher is encouraged to interact individually with the student at any time, asking specific question(s) to clarify and encourage the student to extend ideas, help prompt and scaffold the student's oral interaction, probe the range and depth of their oral language skills, and verify the student's understanding of what s/he is saying.

For the future researchers, this study should be replicated by considering some limitations found such as making sure that the sample is large to gain significant result. Using a sufficient amount of instructional time devoted to conduct the quiz is also recommended. Finally, it expected that the significant finding can be obtained though the use of the qualified question set and audiotexts given.

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APPENDICES

Symbols for discourse transcription:

Pause

    Long   ... (N)

    Medium   ...

    Short   ..

Filled pause

    Long   uhm

                   uh

    Short   ehm

                   eh

Table 1. Data of introducing oneself

Subject	Utterances	Identified mispronunc. & error(s)	Conversational Feature	Effective words
Whatspp quiz group				
4. NN	Okay well my name is NN. You can call me N. And now I live .. at number nine HY street at PS and then ... I .. I am eighteen years old ... I have many hobbies, there are ... I like to .. I like to write some short stories and I like reading.	Live [liv] I [ai:y] Reading [ridiŋ]	Pause: medium & short Interjection: *okay, well* False start: *there are ... I like to* Repetition: *I .. I am* *I like to .. I like to write*	36 words
5. KM	Okay ... uh.. my name is KM but you can call me just IL .. uh .. actually I live in BP city EK but ... uh ... but usually .. eh .. when it .. when .. weekend comes .. I go to my grandma's house in BL city .. uhm .. okay about my hobby ... uh ... I like .. what is that .. ehm .. such as searching for foods in ... any place like .. ehm .. the food that I .. that I've never .. that I've never eaten before .. and .. eh .. what's that .. travelling .. and one more .. reading but .. uh .. especially for reading novels and comics. I like manga and I like .. ehm .. Dee ... Dewi Lestari's novels. I love it. Okay, thank you.	Manga /maɲa/	Pause: medium & short Filled pause: *uh, eh, uhm, ehm* Interjection: *okay, what's that* Repair: *when .. we can come .. I go to* Repetition: *but ... uh .. but* *that I .. that I've never .. that I've never eaten*	26 words
6. FT	Hi my name is FAM, my friends usually called me F but my parents and my family called me differently. They call me eh .. A. Now I'm a senior student at MMISUM ... but actually I come from TR..eh.. however, I've been ..	Differently [dɪfərənslɪ] A [ei] Korean [korɪən]	Pause:Short Filled pause: *eh, uh*	43 words

	uh .. I've been living in Malang for almost eh seven years because since I was in senior high school I had studied in Malang. About my hobbies, I like reading especially .. eh translated novel. I also like eh .. watching movie, especially Korean drama.	Usually called (call) My family called (call)		
7. RZ	Hi, my name is RZ, my close friends call me IC. I live at JM BL. I love travelling cause it is my hobby.	-	-	21 words
8. NM	My name is NM. I'm from PS and my hobby is listening to the music. I like all the genre of music like pop, jazz and the others.	Genre [zɪnrə]	-	24 words
9. NR	Hello, my name is NSL, my nickname is NR and I come from MJ originally and .. but now I live in Malang to study English and my hobbies are playing badminton, browsing internet and cleaning up the environment for tyding up the.. the house... Thank you.	Hello [hʌlo] The environment [ði:]	Pause:short & medium Repair: *and .. but now* Repetition: *tyding up the.. the house*	38 words
10. HB	Well, I want to introduce about myself. My name is .. my nickname - my nickname is U. My address is JB and my hobby is reading but .. eh .. I don't love.. I don't love to read such lesson book like mathematics, chemist and many other but ..eh I like reading anything about story like novel ... fable, fairy tale and especially eh stories. Thank you.	Mathematics [mætimeti:ks] Chemist [ʧemi:s] Anything [eniθi:ŋ] Chemist (Chemistry)	Pause:short & medium Filled pause: *eh* Repair: *my hobby is reading but .. eh .. I don't love.. I don't love to read* Repetition: *my nickname - my nickname is* *I don't love.. I don't love to read*	45 words
11. WR	Hello, my name is WB but you can call me WR. I come from PS but now I stay in dormitory at GJ street	Listening [lɪstenɪŋ]	-	30 words

	number fifty and I like listening to a music very much.	to a music (to music)		
12. AL	I am going to introduce myself to you. I am AL that's what my friends usually call me. I'm from P,M,EJ but now I'm living in MSA MMSIU at G street fifty M. I have some hobbies such as reading novels and books, writing a story and browsing on the internet. Thank you.	Browsing [brɔsɪŋ]	-	26 words
13. TH	My name is TAA, my nickname is TH. I live in PBR A eighty and my hobby is taking a photograph.	Live [li:v] Photograph [potogrɛf]	-	15 words
14. AD	Hi my name is AZ, you can call me AD. I stay in IBS NF M. I have eh several hobbies eh actually I like reading but sometimes I also like litening to music. Thank you	Music [musɪk]	Filled pause: *Eh*	28 words
15. RR	My name is RRS eh you can call me F ehm I come from TG and my hobby is reading	Reading [ridi:ŋ]	Filled pause: *eh, ehm*	14 words
16. LD	Hello .. I'm LD, my friends call me L, I'm from MJ it is near S and my hobby is reading but I also like eh cooking and many more.	-	Medium pause Filled pause: *eh*	19 words
17. CM	Hello, my name is CM eh and my hobby is watching... cartoon and also watching Korean drama	Korean [korɛən]	Medium pause Filled pause: *eh*	10 words
18. IK	My name's IRS you can call me IK. In Malang I live in SA street number ten and my hobby is listening Korean music because I'm a K-pop lover	Live [li:v] In [i:n] Listening (without to) Korean [korɛan]	-	20 words
19. SR	Okay Let me introduce myself. My name is SRF you can call me SR eh I come from west B and eh my	-	Interjection: Okay	22 words

	hobby is shopping. I like shopping very much		Filled pause: *eh*	
20. TD	Hello my name is ITD and you can call me TD. I'm from B and my hobby is listen to music especially Korean music	Listen (listening) Especially [espesiali] Korean [korɛan]	-	18 words
21. FA	Hello my name's FHA you can call me eh FA. Uh my hometown in the RB on B street number seventeen G, EJ Indonesia, and my hobby is travelling and also shopping and swimming	Swimming [suimi:ng]	-	21 words
22. HR	Hi.. well I'm HRA and you can call me HR and .. I got my hobby. I like fishing though eh well I .. I don't like eh some part of fishing as waiting but ya I like to eat fish so I like fishing	Don't [dɔnt]	Short pause Filled pause:*eh*	27 words
23. ZK	Hello. My name's ZKM you can call me ZK. I live at M in K street. I like to have a chat, a lot of chat with my friends, my boyfirend, my parents .. that's all	Live [li:f] At (in) M In (on) K street Chat [tjɪt]	Medium pause Repair: *a chat, a lot of chat*	22 words
24. SP	My name is SP I live in B. Now I'm studying in U	-	-	10 words
25. RO	My name is RO eh I live in K number nine in M and my hobby is browzing in the internet	-	Filled pause: *Eh*	13 words
26. MN	Hi my name is MNA my nickname is A. My hobbies are .. reading, watching and singing	Watching (watching movie)	Medium pause	10 words
27. FN	My name is NFR I have several nicknames.Eh people usually call me F, R or A. I'm from M. And my hobbies are reading books, reading fictions and then playing games	-	Filled pause: *Eh*	28 words

		and watching movies. That's all			
28.	HN	Hello. Let me introduce about myself. I'm HNF and you can call me H. I live in P but now I stay in SKD number eighteen LM. I have some hobbies. They are shopping, traveling and singing.	-	-	26 words
29.	EV	Ok, my name is EV. I come from N, uh and my hobby is eh listening to music	-	Filled pause: *Uh, eh*	13 words
30.	JZ	Hi my name is NJZ you can call me JZ. I come from M and my hobby is reading	-	-	14 words
31.	RT	My name's RDA all of my friends call me RT and .. basically I'm from Md but now I live in M at Mj street number twelve LM. My favorite activities are eh playing football, games, eh and travelling	-	Short pause Filled pause *eh*	30 words
32.	SH	Okay uh my full name is SH my nickname is S. I'm from Md island especially in P. In M I live in Mj village. My hobby is rafting	-	Interjection *Okay* Filled pause: uh	16 words
33.	NA	Ok .. allow me to introduce myself to you. My name's NA you can call me NN. I live in N M and my hobby is ... eh playing football	-	Filled pause : *eh* Short and medium pause	20 words
34.	IS	My name is IK and all my friends call me IS so my nickname is IS. Eh for the address I live in .. Sk street but I don't know the exact number of the house. And for the hobby actually I have so many hobbies but the most I like is reading a novel especially for detective genre just like detective Conan, Sherlock Holmes	Address [adræs]	Short pause	40 words
35.	SA	Okay .. Okay .. Let me introduce myself my name is SAF eh you can call me SA. I'm coming from west B	-	Short pause Filled pause: *eh* Repetition: *Okay ..*	18 words

	and I like shopping very much		*Okay..* Interjection *okay*	
36. AW	My name's AWS. I come from L and my hobby is jogging	-	-	10 words
37. AV	My name is AV eh and I come from L. My hobby is travelling	-	Filled pause: *Eh*	10 words
38. AT	My name's ATA you may call me AT. And I come from east Kl Bp city. And my hobby is drawing, singing, watching music and sometimes reading	Watching music (clip)	-	21 words
39. MR	Hello my name is MRA and my nickname is MR I come from T and my hobby is travelling	-	-	11 words
40. FZ	Hello my name is AFZ my nickname is FZ eh I live in H street number fifty B J. My hobby is playing music especially in guitar	-	Filled pause: *Eh*	16 words
41. AF	My name is NAS I'm - I come from Thailand and my nickname is AF or you can call me only N and my hobbies are playing table tennis and playing volleyball	Table [tebəl] Volleyball [vɔlebɔl]	Repair:*I'm - I come*	20 words
42. DW	Hello my name is DWK, my nickname is DW. I come from Mj but now eh I'm living in S M. My hobby is reading a novel	-	Filled pause: *Eh*	16 words
43. NL	Hello my name is NLH my nickname is NL. I come from Md and my hobby is travelling	-	-	12 words
Conventional quiz group				
44. IR	Good morning. My name is DIR. I'm from TG and my nickname is IR. My friends call me IR.	Is [i:s]	-	14 words
45. SV	Hello my name is SRF, my nickname is S. I come from NG and my hobby is watching movie, reading.. article and .. maybe	-	Pause: Short	21 words

	shopping			
46. MF	Hello good morning, my name is MF. You can call me F but I have a famous nickname eh .. P .. most of my friend call me P ya. My address is on Jalan KU at NF boarding house. I'm a student in SIUM ehm .. in English Department in HF... I'm in seventh semester and my hobby is reading, but it is just reading a novel. I can read novel almost one hundred pages a day, ya ... okay .. this is just the short about me.. ya .. thank you.	It is [it i:s] Department [dɛpa:tmən] Short (short talk)	Pause: medium & short Filled pause: *eh* Interjection: *okay, ya*	40 words
47. AM	OK. My name is AM. I live in SA street number ten G M	-	-	10 words
48. TJ	My name is TJ. I come from P M and my hobby is browsing internet and playing football.	Browsing [brɔsɪŋ]	-	14 words
49. RF	My name is RF and I come from P eh in M island exactly, and my hobby is browsing and listening to music.	Browsing [brɔsɪŋ]	Filled pause: *Eh*	18 words
50. NS	Eh my name is NZ and you can call me NS eh I'm from ehm K PS and my hobby is uh swimming pool	Swimming pool (swimming)	Filled pause: *eh, ehm,uh*	14 words
51. DD	Well, my name is DD and you can call me D. I come from K, WJ and my hobby is reading a book.	-	Interjection: *Well*	18 words
52. EC	Okay, my name is K,my friend usually .. usually call me EC and my address is in P and my hobby is reading, singing and browsing.	Usually [yusuʌli:] Hobby [hʌbi:] Browsing [brɔsɪŋ] Browsing (browsing internet)	Repetition: *usually .. usually*	16 words

53. SU	Okay, let's me introduce myself. My name is AS. My nickname SU and I live – I live in L and - and my hobby is playing football.	Live [lɛv] Nickname [nɪknɛm] Let's (let) My nickname (my nickname is)	Repetition: *I live – I live* *and - and my hobby*	14 words
54. ZZ	Ehm .. My name is NAR but you can call me ZZ .. and my address is ehm Jalan KD number six and my hobby is .. singing.	Address [ʌdrɛs] Singing [si:ɳɪŋ]	Pause: short Filled pause: *eh, ehm*	17 words
55. OP	Well, now I would like to introduce myself. My name is TF, you can call me OP or my friends always call me OP but when I was in child my friend call me TO ya it's different - different time I think. And I'm from B exactly S – S city and I have many hobbies actually. But now I like more football than other because .. three time in a week I playing football as in K or in another place. Usually ya special for my hobby now I have the special hobby for write article.	Football [futbʌl] Special [spesiʌl] Like more football (like football better than) Three time (three times) I playing football (I play football) The special hobby for write article (a special hobby that is writing an article)	Pause: short Interjection: *well, ya* Repetition: *different - different time* *special for my hobby now I have the special hobby*	37 words
56. AI	Eh okay, eh here I would I would like to introduce myself. My name	Hobbies is	Pause: short	27 words

	is KA eh my nickname AI and I come from M .. and my hobbies is eh I .. eh I .. I really like to listen - listen the music especially English music.	(hobby) Listen the music (listen to the music)	Filled pause: *eh* Interjection: *okay* Repetition: *I would I would like* *I .. eh I .. I really* *to listen - listen the music*	
57. LK	I would like introduce to you .. eh I would like introduce myself to you, my name is LM, my nickname is LK. My address is .. my address is N. And my hobby is cooking eh especially.. especially cooking some of cookies	I would like introduce (I would like to introduce) Some of cookies (some cookies)	Pause: short Filled pause: *eh* Repair:*I would like introduce to you .. eh I would like introduce myself to you* Repetition: *My address is .. my address is* *especially.. especially*	25 words
58. FH	Okay, my name is FA ehm usually my eh my friends call me FH and my address in RPB three D eh G city in - in EJ and my hobby eh I have two hobbies, the first is swimming. I always swimming eh in twice eh twice in two weeks eh and my second hobbies is cooking.	Address [ʌdrɛs] Swimming [swi:miŋ] Always swimming (always swim) Twice in two weeks (every two weeks) Hobbies is (hobby is)	Filled pause: *eh* Repetition: *my eh my friends* *in - in EJ* *in twice eh twice*	35 words
59. FR	My name is EPA my nickname FR and I come from C CJ and my hobbies is painting and design because I want to pursue s2 in more on fashion.	Pursue [porsu] My nickname (my nickname	-	20 words

		is) Hobbies is (hobbies are) Design (designing)		
60. KH	My name is SK, eh just call me KH eh I live in PP and eh my hobby is reading, I love reading eh novels and other book which is interesting.	-	Filled pause: *Eh*	23 words
61. LL	Good morning everybody, ehm my nickname is LL. Eh I live in M and my hobby is reading some books.	-	Filled pause: *ehm, eh*	16 words
62. FI	Hello, my name my name is F and I live in S and my hobby .. my hobbies are writing and reading some books.	-	Pause: Short	17 words
63. LU	Hello, I'm LU. Ehm I stay at MSAA er I like travelling and eh watching movies.. ya..	-	Filled pause: *ehm, eh* Pause: Short Interjection *ya*	10 words
64. UN	Hello, my name's UN I'm from SD and now ehm I live in TGW. Eh I have some hobies. There are ... reading books, novels, magazines and others and also listening music .. eh I like Bruno Marz.. and others	Novel [novEl] Listening (to) music	Filled pause: *ehm, eh* Pause: Short	21 words
65. LK	Hi, my name is LK eh I come from ML .. and my hobby is watching film ehm like Korean drama eh and .. Harry Potter .. and a lot of others	-	Filled pause: *ehm, eh* Pause: Short	18 words
66. NO	Hello, my name is NO, I live in ehm DP and .. my hobby is .. swimming	-	Filled pause: *ehm* Pause: Short	10 words
67. RO	Let me introduce myself .. my .. name is.. my full name is MRO .. and my nick name is .. RO and I live in JS street MM .. and then my	Browsing [brɔsıŋ]	Pause: Short	17 words

		hobby is swimming, reading and browsing	Browsing (browsing internet)		
68.	MU	Hello, let me introduce myself, my name is MSR you can call me MU or anything eh I live in ehm you know Jalan M BL and my hobbies are eh actually not hobby but eh the thing eh the activity that I really likes are ehm watching movie, listening to music, ehm browzing, chatting and .. ya.. many others	Hello [halo] Browsing [brɔsıŋ] Browsing (browsing internet) I really likes (like)	Filled pause:, *eh* Repair: *my hobbies are eh actually not hobby but eh the thing eh the activity that I really likes are* Interjection *ya*	40 words
69.	BQ	Hi my name is DIBQ my nickname is BQ, my address is on jalan K number .. fifteen and my hobbies is swimming and .. travelling	Address [ʌdres] Hobbies is (are)	Pause: Short	13 words
70.	IM	So ... I'm going to introduce myself. My name's IM and I actually came from RY SA and I moved here just eh just to enter college and start my new life in Indonesia and I'm originally from K. My hobbies are .. singing, listening to music, exploring new things, and ehm making stories	-	Repetition: *just eh just*	33 words
71.	DO	Hello my name is TC my nick name is DO I'm from T regency especially in T district . I love reading I love writing. My favorite book is novel and I love watching movies too. And, I'm interesting with traditional Javanese song and I love with traditional Javanese dance.	I'm interesting with (interested in) I love with (omit with)	-	22 words
72.	HM	Hi my name is HM I'm from BT and my hobby is listening to music	-	-	10 words
73.	MH	Hi my name is MHV my nick name is MH I live in B street at P. My	-	Novel [novEl]	14 words

	hobby is listening to music and reading novel			
74. AF	My name is SAF you can call me AF. I live in M street and my hobby is .. reading a book especially motivation book and writing	-	Pause: Short	18 words
75. IV	Let me introduce myself, my name is RIV you can call me IV eh I live in eh M street number eighty nine .. and my hobby is reading and .. listening to the music	-	Pause: Short Filled pause: eh	16 words
76. ND	Hello my name is ND and uh .. my eh my full name is NDNF you can calle me ND and I live in K I come from K in .. P. And I have hobbies. I have two hobbies. My hobbies uh is are writing and reading	-	Repetition: *my eh my full* Repair: *My hobbies uh is are* Filled pause *uh* Short pause	13 words
77. ET	My name, my full name is ETN and my nickname is ET. I live in M and my hobby is listening to music and swimmingpool	Swimmingpool (swim)	Repair: *My name, my full name*	12 words
78. AK	Hello my name is AK I live in M my hobby is reading	-	-	9 words
79. SO	My name is SOK you can call me SO uh I'm from M and my hobby is dancing	-	Filled pause: *uh*	11 words
80. BY	Allright my name is AAB and people often call me BY eh I come from M and my hobby is watching film	-	Filled pause: *eh*	15 words
81. ZR	Hello my name is FZA people use – people always call me ZR. I live in K street and my hobby is shopping and swimming	Live [li:f] In (on)	Repair: *people use – people always*	13 words
82. YN	My name is YK and you can call me YN. I live in SD and my hobby is .. reading	-	Short pause	13 words
83. DS	My name is DSA my nick name is DS, I live in .. BS street number	reading[ridin]	Short pause	13 words

| | twenty and my hobby -- hobbies are swimming, reading, singing and dancing | | Repair

my hobby -- hobbies | |

Table 2. Data of listening comprehension

Subject	Utterances	Incorrect answer	Identified Mispron. & error(s)	Conversational Feature
Whatsapp quiz group				
4. NN	Colonial leaders approve the final Declaration of Independence Day for the United States on July four, sixteen sixty-six.	1666 (1776)	-	-
5. KM	The answer number second eh is on July four, seventeen seventy-four	1774 (1776)	-	Filled pause: *Eh*
6. FT	The United States got its Independence Day on July fourth, seventeen seventy-four.	1774 (1776)	Got [gʌt]	
7. RZ	Well, it's talk about root vegetable. It's about carrot. Its characteristics are the shape is quite long, the color is orange and it's contain a lot of carotene, vitamin A but not all carrots are orange but sometimes white, it's about five centimeters long and sometimes it's about twenty five centimeters long.	-	Vegetable [vedjətæbl] Centimeters [sentɪmɛtərs] It's talk (it talks) It's contain (it contains)	Interjection: *Well*
8. NM	Colonial leaders approve the final Declaration of Independence Day for the United States on July four, seventeen seventy-six	-	Approve [əprov]	-
9. NR	Colonial leaders approve the final Declaration of Independence Day for the United States on July four, seventeen seventy-six.	-	-	-
10. HB	Colonial leaders approve the final Declaration of Independence Day for the United States on July four, sixteen sixty-six.	1666 (1776)	-	-

11. WR	The kind of vegetable root discussed in the audiotext is about carrot, and the characteristics are long, thin, and orange.	-	Thin [Өi:n]	-
12. AL	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth, seventeen seventy-six	-	Day [dɪy]	-
13. TH	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth, seventeen seventy-six	-	July [djuli:]	-
14. AD	Date of Independent Day is fourth of July, seventeen seventy-six	-	Date [det] Independent (independence)	-
15. RR	It's all about carrot. The vegetable is carrot and usually people said that carrot is long, thin and .. orange but in .. uh ... but ... they think wrong .. usually ... sometimes carrot is not like their think.	-	Vegetable [vedjətæbl] Like their think (like what they think)	Pause: short, medium Repair: *usually ... sometimes*
16. LD	This record discussed about .. carrot. The characterist.. the characteristics of carrot is easy to rai.. to raise. It is contained a lot of carotene and vitamin A. It has long, thin but uh carrot has many species, it has many shapes eh I mean it has many variety. It has so many space eh shape but also color. It is eh easy to.. ehm fertilized or it is easy to plant. It needs ehm sandy soil and there is no rock over there.	-	Carotene [kerotain] Shapes [ships] Variety [vəriəti]	Pause: short Repair: *characteristics* *raise* *shape*
17. CA	American Independence Day is on the fourth July seventeen seventy six	-	American [ʌmɛrikʌn]	-
18. IK	On July fourth seventeen and seventy six	-	-	-

19. SR	Collonial leaders approved the final declaration of independence day of the United States on fourth July seventeen seventy six		United [yunɪtɪd]	-	
20. TD	The root which is discussed in the text is carrot. It has ehm some characteristics for example it's easy to raise and easy to harvest. It also has good taste and it contained a lot of carotene and vitamin E. People describe it as long, thin and orange vegetablebut not all carrot is orange. Eh carrots well grown in sandy soil and it should have no rocks	-	Contained [kontɛnt]

Orange [orɛns]

Vegetable [vedjətæbl]

Grown [graun] | Filled pause: *ehm, eh* | |
21. FA	Collonial leaders approved the declaration of independence day of the United States in the fourth of July nineteen eh sorry seventeen seventy eh seventeen seventy four	1774 (1776)	In (on)	Filled pause : *eh*	
22. HR	What is discussed is carrot. Carrot is easy to raise and easy to harvest. They're containing carotene which .. will be vitamin A for human	-	-	Short pause	
23. ZK	On July fourth 1776	-	-	-	
24. SP	The text is talking about carrot. The charac—the characteristics of carrot, I mean common carrot is long, thin, and orange but in fact the carrots which are white, short and eh thick, it is found in sandy soil	-	-	Repair: *The charac—the characteristics of carrot, I mean common carrot*

Filled pause: *eh* | |
| 25. RO | The audio ..that.. the audio text tells about carrot. Carrot is easy to raise and easy to harvest and contained a lot of carotene which contained vitamin A. Eh usually people say that carrot is always ehm long, thin, and orange but eh carrot eh has different size eh not all carrot are orange | - | Raise [rais]

Contained [kəntæn] | Filled pause:

Eh | |
| 26. | That audiotext is talk about carrot. Eh when – when people think about | - | Is [i:s] | Filled pause: | |

	MN	carrot, they usually think that carrot are long, thin – long, thin and - haha long, thin, and orange.Uh carrots are easy to raise and harvest because eh and it's contained eh vitamin A		Think [tiŋ] Contained [kəntæn] Vitamin [vitamin] Is talk (talks)	*Eh, uh* Repetition: *when – when people* long, thin – long, thin and - .. long, thin, and orange Repair: *because eh and*
27.	FN	On July fourth seventeen seventy six	-	-	-
28.	HN	The kind of vegetable root discussed in the audiotext is about growing carrot.. Carrots are easy to raise and easy to harvest. The taste's good and it contains a lot of carotene and vitamin A .. The characteristics of carrot are long, thin and orange. It comes in many different size but all carrot are orange	But all (but not all)	Vegetable [vedjətæbl] Thin [ti:n]	Medium pause
29.	EV	On July fourth seventeen seventy six	-	-	-
30.	JZ	The collonial leaders approved the final declaration of independence day for the US on July fourth seventeen seventy six	-	-	-
31.	RT	It talks about carrots. Eh carrots are easy to raise and easy to harvest. Eh it tastes good, and eh it contained a lot of carotene and vitamin A	-	Contained [kɔntæn] Carotene [kerotein] Vitamin [vitamin]	Filled pause: *Eh*
32.	SH	July fourth seventeen seventy six	-	-	-
33.	NA	Carrots has characteristics long, thin, orange. It is easy to harvest but its taste is good.. eh carrot contained of carotene and vitamin A. Not all carrot is orange, it is different in	-	Country [kontri] Carrots has (have)	Filled pause: *Eh* Medium pause

	each country, it is different in shape			
34. IS	Collonial leaders approved the final declaration of independence day for .. the US on July fourth seventeen and seventy six	-	-	Short pause
35. SA	on July fourth seventeen seventy six	-	-	-
36. AW	On fourth of July seventy – sevent – seventeen and seventy six	-	-	Repair: *seventy – sevent – seventeen*
37. AV	On the seventeen seventy six Collonial leaders approved the final declaration of independence day for the US	-	On (in)	-
38. AT	The collonial leaders approved the final declaration of independence day of the United States on fourth July seventeen seventy six	-	-	-
39. MA	on July fourth seventeen seventy six	-	-	-
40. FZ	The audiotext talks about carrots. Carrots are easy to raise and easy to harvest. The taste is good. It contains of vitamin A eh all of the people always picture it like vegetable that long, orange, but actually eh it has different shape and not all – not all carrots are orange. Like there's market carrots are about five centimeters around and imperator carrots are twenty five centimeters long and Bel – Belgian white carrots have white color		Vitamin [vitəmin] Vegetable [vedjətæbl]	Filled pause: *eh* Repetition *not all – not all* Repair *Bel – Belgian*
41. AF	It celebrates of independence day on July fourth seventeen and seventy six	-	-	-
42. DW	on July fourth seventeen and seventy six	-	-	-
43. NL	American will celebrate the nation's independence day on July fourth	-	American	-

	seventeen seventy six		[amɛrikʌn]	
Conventional quiz group				
44. IR	The kind of this vegetable root is carrot. Carrot .. when people think of carrots, they imagine that carrots are thin and orange but all carrots can be in different color and shape. Another carrot may around five centimeter and the color is white.	-	Vegetable [vedjətæbl] Thin [Өiːn] Shape [sæp] Around [əron] Centimeter [sentimɛtr]	Pause: Short
45. SV	Common people thinks that carrot is such kind of vegetable that has characteristics long, thin and orange. Whereas, in Paris .. carrot is not always orange in Paris ... Paris carrots are about five centimeters and Belgian has white carrot is about twenty-five centimeters around.	-	Orange [orɛŋ] Such [sɛtʃ] Vegetable [vedjətæbl] Centimeters [sentɪmɛtərs]	Pause: Short Repetition: *in Paris .. carrot is not always orange in Paris*
46. MF	Carrots are long, thin, orange and the tastes are good. The Paris Market carrots are five centimeters long and the Belgian White carrots are thin and twenty-five centimeters long.	-	Thin [Өiːn]	
47. AM	The kind of vegetable root is carrot and its characteristic is long eh thin and the color is orange but not all of the carrot is orange ... because uh there is a kind of carrot but I forget eh to ..state it. I just can mention the three kind of characteristics eh the three characteristics of the carrots	-	Kind [kɛn] Characteristic [kʰaraktərıstk]	Medium pause Repair: *The three kind of characteristics eh the three characteristics*
48. TJ	The report explained us about the root vegetable that is carrot which has several characteristics. Those are easy to raise, easy to harvest and also carrots is full of carotene and full of vitamin A. So, people usually pictures in their mind that carrot is always long, thin, and also orange.	-	Vegetable [vedjətæbl] Carrots is	Pause: short Filled pause: *ehm* Interjection *ya*

		But, ehm some carrots have different characteristics as people .. ehm pictured .. ya.		(carrots are) People usually pictures (people usually picture)	
49.	RF	July fourth, seventeen and seventy-six.	-	seventeen and seventy-six (seventeen seventy six)	-
50.	NS	Uh vegetable root is eh like agri-agriculture growing with root .. uhm ... it's like if we raise .. maybe .. ehm waterful long time, orange and different carrots and the best .. and the best result from eh audio text is eh carrots should be grown in the uhm .. in the soil	Not answering the question	Vegetable [vedjətæbl] Raise [rais]	Pause: short, medium Repair: *agri-agriculture* Repetition: *and the best .. and the best result* *in the uhm .. in the soil*
51.	DD	It was on July fourth, seventeen seventy-six.	-	-	-
52.	EC	The vegetable root discussed in the audiotext is carrot. And carrot is .. eh the charactersist - its characteristics are thin, long, orange. It tastes good, it has a lot of carotene and vitamin A.	-	Vegetable [vedjətæbl] Carotene [karotin] Vitamin [vɪtemɪn]	Pause: short Filled pause: *eh* Repair: the *charactersist - its characteristics*
53.	SU	Eh when did Colonial leaders approve the final Declaration of Independence Day for the United States is on July four, seventeen seventy-six	-	Approve [əprov] July [djule]	Filled pause: *Eh*
54.	ZZ	Uh this is eh about the vegetable eh it is named is rich. The characteristics is long and orange and here .. eh .. has many eh .. vitamin A and it is different uh with characteristics in rich in market because in market its	Not exactly answering the question	Vegetable [vegətəbl] Vitamin [vɪtamɪn]	Pause: short Filled pause: *uh, eh*

	eh characteristic is more round and the color is white.		Characteristic [kʰaraktəristk] Round [ron]	
55. OP	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth, seventeen seventy-eight-six	-	-	Repair: *seventy-eight-six*
56. AI	The vegetable is - the name of the vegetable is eh carrot and the characteristic is eh the first easy to harvest and then it contains eh more or much carotene and it contains eh vitamin A and eh not all – not all carrots eh is orange. And then it is easily grown in sandy soil and it – it also can easy – easily grown in warm day, cool night and medium temperature	-	Vegetable [vegətəbl]	Filled pause: *eh* Repair:*The vegetable is - the name of the vegetable is* *more or much carotene* *can easy – easily grown* Repetition: *not all – not all carrots*
57. LK	The Colonial leaders approve the final Declaration of Independence Day for the United States why the American statue is special the final - the final declaration in Independence Day as the opening symbol of America in eh past eight years and that in the New York harbor one hundred year or in nineteen ninety four	Not answering the question	United [yunitd] The American [thə ʌmərikən] Final [feinəl]	Filled pause: *Eh* Repetition: *the final - the final declaration*
58. FH	The audiotext eh talked about .. eh root vege-vegetable about carrot and the character – the characteristics of carrots is eh eh orange, long and thin, but eh not all carrots are orange. Eh there are many eh characteristics uh except orange carrot that is about the difference about size, and shape. And the car-carrots eh I'm sorry .. carrot market uh has eh five centimeters around about the long	Hot water (hold water)	The audiotext [thə] Shape [sep] Imperator [empiritər] Centimeters [sentɪmɛtərs] Belgian	Pause: short, medium Filled pause: *eh, uh, ehm* Repair: *vege-vegetable* *the car-carrots*

	and Imperator carrot twenty-five centimeters and Belgian carrot uh around ... I'm sorry but not clear .. and carrot ehm can grow in the sandy oil not hot water for a long time and carrot cannot live in a soil no rock soil I mean		[bɛlgiən] Live [laif]	
59. FR	Uh.. ehm American – American in the colonial leader celebration in six eh seven – seventeen seventy-six. This is as a symbol of America for opening a symbol of America to public at eight years	-	Six [si:ks] Seventy [sɛvənti:] America [ʌmɛrikʌ]	Pause: short Filled pause: *uh, ehm* Repetition: *American – American* Repair: *six eh seven – seventeen*
60. KH	Carrot contains a lot of vitamin and there are a lot of the kinds of the carrots. .. Uh and the carrot .. eh the size of the root is eh maybe seven centimeters.	The size is 7 (5 cm around and 25 cm long)	Size [sɛz] Centimeters [sentɪmɛtərs]	Pause: short Filled pause: *uh, eh*
61. LL	It was on July fourth, seventeen seventy-six	-	-	-
62. FI	Ehm .. The kind of vegetable root it is described in the audiotext is carrot and its charac – characteristics .. ehm long .. and orange	-	Vegetable [vedjətæbl] The audiotext [thə]	Pause: short Filled pause: *ehm* Repair: *its charac – characteristics*
63. LU	On July four, seventeen seventy-six	-	-	-
64. UN	The Colonial leaders approve the final Declaration of Independence Day for the United States .. on July fourth seventeen and seventy six	-	-	Pause: short
65. LK	The vegetable is carrot, and .. the characteristic is easy to be raised, easy to harvest ehm and also contained of vitamin A. Eh every	-	Vegetable [vedjətæbl]	Pause: short Filled pause: *Eh*

	carrot eh has different size eh and also not all color of carrot is orange		Raise [rais]	
66. NO	The Colonial leaders approve the final Declaration of Independence Day for the United States on ... July fourth seventeen seventy six	-	-	Pause: short
67. RO	Four July seventeen seventy four	Four (six)	-	-
68. MU	The kind of vegetable in the audiotext is carrot. The characteristics are long, thin, and .. it has vitamin A	-	Vegetable [vedjətæbl]	Pause: short
69. BQ	American will celebrate their independence day on July fourth in seventeen seventy six	-	-	-
70. IM	It's on eh fourth of July seventeen seventy six	-	-	Filled pause: Eh
71. DO	The kind of vegetable root discussed in the audiotext is carrot. Carrot has eh delicious taste and then ... eh a lot of caroten	-	-	Filled pause: Eh Pause: short
72. HA	It's on July four.. eh fourth seventeen seventy six	-	-	Repair: *four.. eh fourth*
73. MH	Eh on July four eh seven .. in July fourth seventeen seventy six	-	-	Filled pause: *Eh* Pause: short Repair: *on July four eh seven .. in July fourth*
74. AF	Collonial leaders approved the final declaration of independence day for the US on July fourth seventeen and seventy six	-	-	-
75. IV	On July fourth seventeen seventy six	-	-	-
76. ND	On July seventeen seventy eight	Eight (six)	-	-
77. ET	Colonial leaders approve the final Declaration of Independence Day for	-	Approve	Pause: short

	the United States on July fourth .. seventeen sixty-six.		[eprɔf]	
78. AK	On.. July fourteen four nineteen ninety .. one thousand nineteen ninety six	fourteen four nineteen ninety .. one thousand nineteen ninety six (1776)	-	Pause: short Repair *fourteen four nineteen ninety .. one thousand nineteen ninety six*
79. SO	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth ... seventeen sixty-six.	-	United [junɪtɪd]	Pause: medium
80. BY	Colonial leaders approve the final Declaration of Independence Day for the United States .. It is at July fourth seventeen sixty-six	-	At (on)	Pause: short
81. ZR	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth nineteen ninety seven	nineteen ninety seven (1776)	United [junɪtɪd]	-
82. YN	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth seventeen seventy-six.	-	United [junɪtɪd]	-
83. DS	Colonial leaders approve the final Declaration of Independence Day for the United States on July fourth seventeen seventy-six.	-	United [junɪtɪd]	-

Table 3a. Data of reading aloud

Weather, soil conditions and age will affect the way carrots taste. Experts say warm days, cool nights and a medium soil temperature are the best conditions for growing carrots that taste great.

Subject	Identified mispronunciation
WA group	
8. WR	Age [ɪdj] Affect [ifɛk] Temperature [tɪmpərəʧr]
12. RR	Age [ɛɪg] Medium [mɛdɪəm] Temperature [tempərəʧr]
13. LD	Temperature [tɛmpərətər]
17. TD	Great [gri:t]
21. SP	Age [ɪdj]
36. MA	Medium [mɛdɪəm]
25. HN	Medium [mɛdɪəm]
37. FZ	Medium [mɛdɪəm]
CQ group	
41. IR	Warm [wʌ:m] Medium [mɛdɪum] Temperature [təmpɛrəʧr] Taste [tɛs]
42. SV	Warm [wʌ:m] Affect [ifɛk] Medium [mɛdɪəm] Taste [tets]
43. MF	Warm [wʌ:m] Medium [mɛdɪum] Great [gret]
44. AM	Temperature [tɛmpərətər] Great [gri:t]
45. TJ	Weather [wɪƟr] Medium [mɛdɪəm] Warm [wʌ:m]
47. NS	Temperature [tempəratur]
49. EC	Affect [ifɛk] Say [sɛi] Medium [mɛdɪəm] Taste [tes]
51. ZZ	Affect [ifɛk] Carrots [kɔrets] Taste [tɛs]
55. FH	Temperature [tempəratur]
57. KH	Warm [wʌ:m] Medium [mɛdɪəm]

| 59. FI | Medium [mɛdɪəm]   Conditions [kɔndiʃns] |
| 61. UN | Weather [wɪϴr] |

Table 3b. Data of reading aloud

The Statue of Liberty has stood in New York Harbor for more than 100 years. It was a gift from the people of France in 1884.

Subject	Identified mispronunciation
WA group	
1. NN	Harbor [hɑ:bor]
2. KM	Liberty [libærti] France [frʌnʧ]
10. TH	Harbor [hɑ:bur]
15. IK	Harbor [herbər]
16. SR	Gift [gi:ft]
31. IS	France [frʌnʧ]
34. AV	Statue [steit]
38. AF	Statue [steit] Liberty [laibə:ti]
40. NL	Statue [stetu] Hundred [handrɛd]
CQ group	
52. OP	Liberty [lɑibə:ti]
54. LK	Statue [statu] Years [yərs]
56. FR	France [frʌnʧ]
71. AF	France [frinʧ]
73. ND	Statue [stetu]

Table 4a. Data of pronouncing minimal pairs

BEAN – BIN   BEN – BAN   BUN – BARN

OIL – ALE   ROYCE – RACE   SHEEP – SHIP

Subject	Identified mispronunciation
WA group	
4. RZ	BEN [bɪn] BUN [bən] BARN [bern] ROYCE [rois]
12. RR	BUN [bən] SHIP [sip]
13. LD	BIN [bi:n]
19. HR	BARN [bərn]
25. HN	BIN [bi:n]
CQ group	
42. SV	BAN [bʌn] BUN [bu:n]
43. MF	BIN [bi:n] BAN [bʌn]
45. TJ	BEN [bɪn] ROYCE [roisi]
47. NS	BEN [bɪn] BUN [bən] BARN [bərn] ALE [ɔ:l] SHEEP [si:p]
49. EC	BIN [bin]
51. ZZ	BEN [bin] BAN [ben] BUN [bu:n] ROYCE [roil] RACE [retʃ]
57. KH	BIN [bin] ROYCE [roi:] RACE [rei]
59. FI	BIN [bin] SHIP [sip]
44. AM	BIN [bi:n] BEN [bi:n] BUN [bən] SHIP [sʰip]
72. IV	BIN [bi:n] ROYCE [rois]
74. ET	BEAN [bein]

Table 4b. Data of pronouncing minimal pairs

PEAK – PICK   PECK – PACK   PUCK – PARK

FOUND – PHONED   ABOUT – A BOAT   HURT - HEART

Subject	Identified mispronunciation
WA group	
1. NN	PICK [peɪk]
2. KM	PHONED [pʰon] A BOAT [ə bu:t]
3. FT	A BOAT [ə bu:t]
5. NM	PICK [pi:k] PARK [pɑk] HEART [hərt]
6. NR	HURT [hʌt]
7. HB	PARK [pɑk]
9. AL	A BOAT [ə bɔ:t]
10. TH	PICK [pi:k] PHONED [fun] HURT [hʌt] HEART [hərt]
11. AD	PHONED [fɔ:n] A BOAT [ə bɑut] HURT [hʌt]
14. CA	PICK [pi:k] A BOAT [ə bɔ:t] HEART [hərt]
15. IK	PICK [pi:k]
16. SR	PACK [p^k] PHONED [pʰɔn]
20. ZK	PICK [pik]
24. FN	PACK [p^k]
26. EV	PACK [p^k] A BOAT [ə bu:t]
26. JZ	HURT [hʌt]
29. SH	PHONED [pʰon] A BOAT [ə bu:t]
31. IS	PHONED [pʰon] A BOAT [ə bu:t]
32. SA	PACK [p^k] PHONED [pʰon]
33. AW	PACK [p^k] PHONED [pʰon]
34. AV	PICK [pi:k]

36. MA	FOUND [foun] PHONED [p^{h}on] ABOUT [əbout]
38. AF	PICK [pi:k] PACK [p^k] FOUND [foun] HEART [hərt]
39. DW	PACK [p^k] PUCK [p^{h}ok] A BOAT [ə bu:t]
40. NL	PICK [pi:k] PHONED [p^{h}on] PUCK [p^{h}uk] HEART [hərt]
CQ group	
46. RF	PHONED [p^{h}on]
48. DD	PHONED [p^{h}on]
50. SU	HURT [hʌt] HEART [hərt]
52. OP	PHONED [p^{h}on] HURT [hʌt] HEART [hərt]
54. LK	PECK [p^{h}ek] PACK [p^{h}ek] FOUND[p^{h}on] PHONED [p^{h}on] A BOAT [ə bu:t] HEART [hərt]
56. FR	PICK [pi:k] PHONED [p^{h}on] A BOAT [ə bu:t]
58. LL	PHONED [p^{h}on]
61. UN	PICK [pi:k] FOUND [foun]
66. BQ	PHONED [p^{h}ɔn]
71. AF	HURT [hʌt] HEART [hərt]
73. ND	FOUND [foun]
75. AK	PICK [pi:k] FOUND [foun] PHONED [p^{h}ɔnet] PUCK [p^{h}uk]
76. SO	PUCK [p^{h}uk]
78. ZR	PEAK [peik] A BOAT [ə bu:t]
79. YN	PHONED [p^{h}on] A BOAT [ə bu:t]