

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4-0 Introduction

This chapter is devoted to the analysis, evaluation, and interpretation of the data collected through the questionnaire which was given to 30 respondents who represent the teachers' community in Sudanese universities.

4-1 Responses to the Questionnaire

The responses to the questionnaire of the 30 teachers were tabulated and computed. The following is an analytical interpretation and discussion of the findings regarding different points related to the objectives and hypotheses of the study. Each item in the questionnaire is analyzed statistically and discussed. The following tables will support the discussion.

4-2 Analysis of the Questionnaire:

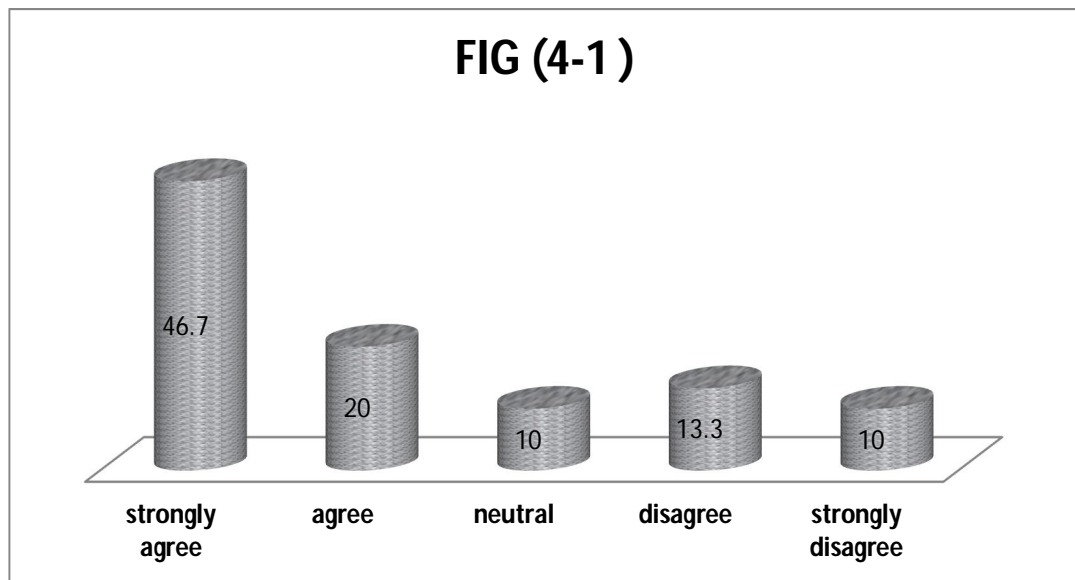
The researcher distributed the questionnaire on determined study sample (30), and constructed the required tables for collected data. This step consists transformation of the qualitative (nominal) variables (strongly disagree, disagree, Undetermined, agree, and strongly agree) to quantitative variables (1, 2, 3, 4, 5) respectively, also the graphical representations were used for this purpose.

Statement No. (1): English language is complicated because orthography does not reflect the pronunciation.

Table No (4-1)

The Frequency Distribution for the Respondents' Answers of Statement No.(1)

Valid	Frequency	Percent%
strongly agree	14	46.7
agree	6	20
neutral	3	10
disagree	4	13.3
strongly disagree	3	10
Total	30	100.0



It is clear from the above table No.(4-1) and figure No (4-1) that there are (14) respondents in the study's sample with percentage (46.7%) strongly agreed with that " English language is difficult because the pronunciation of words is not clearly shown by how they written. ". There are (6) respondents with percentage (20.0%) agreed with that and (3) respondents with percentage (10.0%) were not

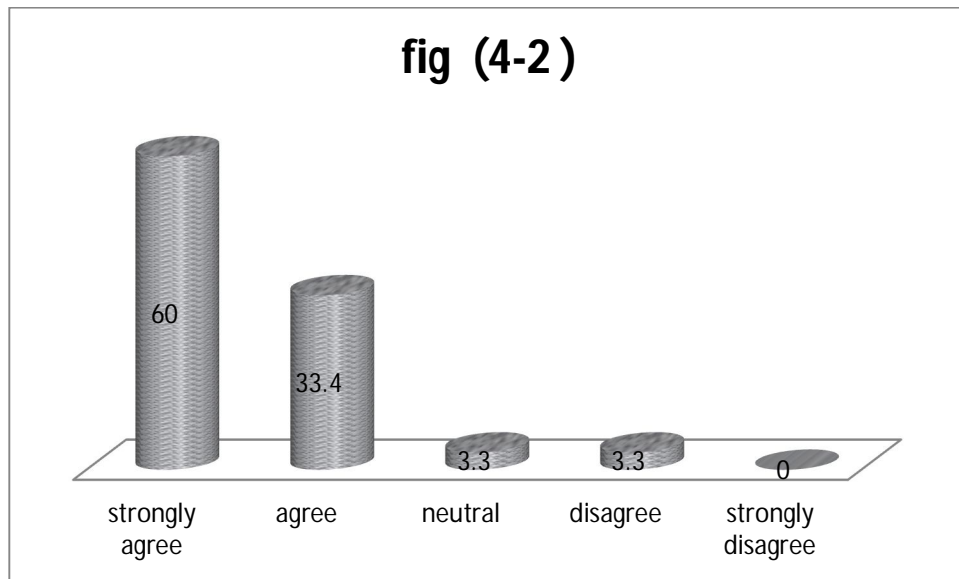
sure that, and (14) respondents with percentage (46.7%) disagreed. And (3) with 10% are respondents strongly disagreed.

Statement No.(2):University syllabus does not sufficiently demonstrate pronunciation drills and exercise.

**Table No (4-2)
The Frequency Distribution for the Respondents' Answers of Statement**

No. (2)

Valid	Frequency	Percent%
strongly agree	18	60
agree	10	33.4
neutral	1	3.3
disagree	1	3.3
strongly disagree	0	0
Total	30	100.0



It is clear from the above table No. (4-2) and figure No (4-2) that there are (18) participants in the study's sample with percentage (60.0%) strongly agreed with

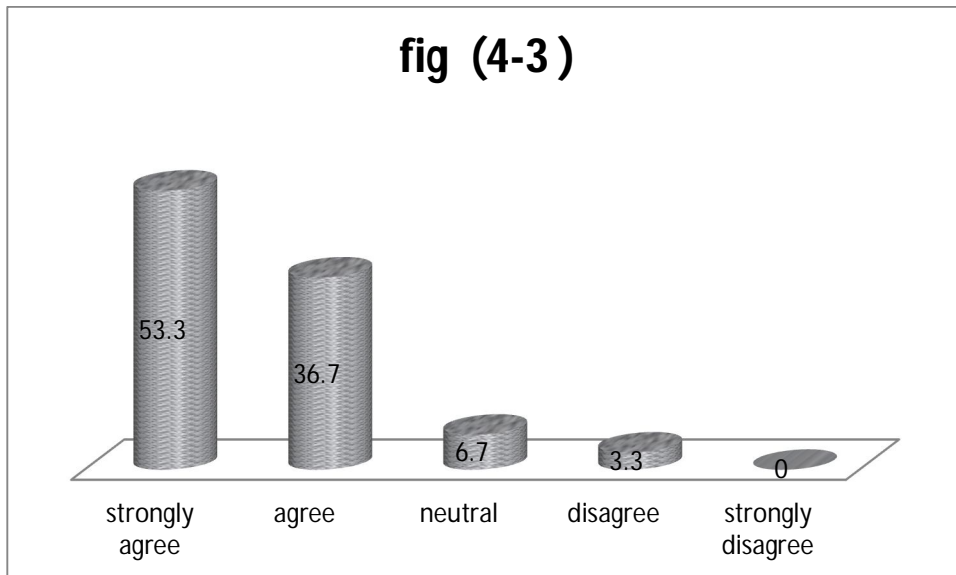
that " University syllabus does not sufficiently cover pronunciation drills and exercise.

". There are (10) participants with percentage (33.3%) agreed with that, and (1 participants) with percentage (3.3%) were not sure that, and (1) participants with percentage (3.3%) disagreed. and (0) participants with 0% are strongly disagree

Statement No. (3): The students lack the basic knowledge of sound system of English phonetics and phonology.

Table No (4-3)
The Frequency Distribution for the Respondents' Answers of Statement
No. (4-3)

Valid	Frequency	Percent%
strongly agree	16	53.3
agree	11	36.7
neutral	2	6.7
disagree	1	3.3
strongly disagree	0	0
Total	30	100.0



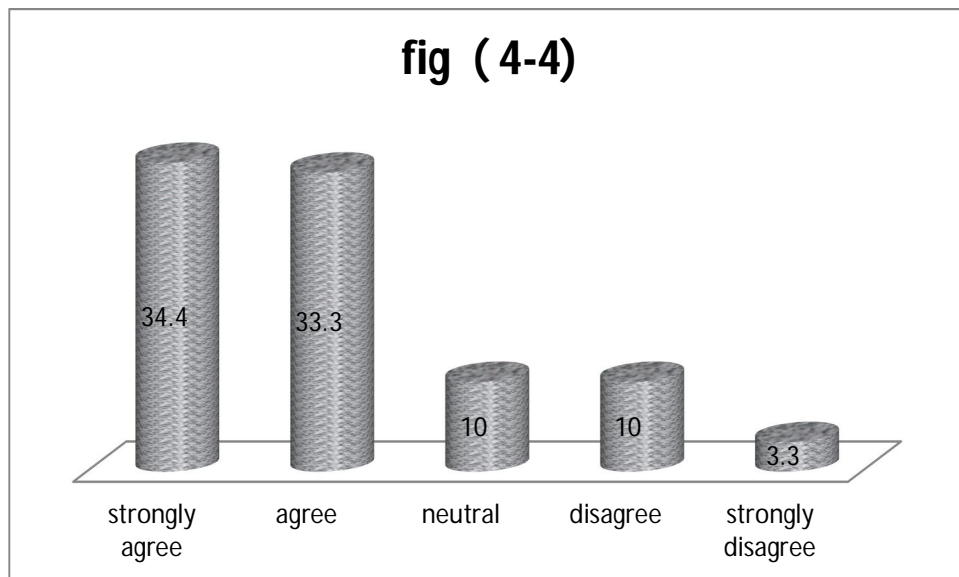
It is clear from the above table No. (4-3) and figure No (4-3) that there are (16) participants in the study's sample with percentage (53.3%) strongly agreed with that “The students lack the basic knowledge of sound system of English phonetics and phonology. ". There are (11) participants with percentage (36.7%) agreed with that, and (2) participants with percentage (6.7%) were not sure that, and (1) participants with percentage (3.3%) disagreed. and (0) participants with 0% are strongly disagreed.

Statement No. (4): Some pronunciation’s errors can be attributed to the ways of teaching.

Table No (4-4)

The Frequency Distribution for the Respondents’ Answers of Statement No. (4-4)

Valid	Frequency	Percent%
strongly agree	13	34.4
agree	10	33.3
neutral	3	10
disagree	3	10
strongly disagree	1	3.3
Total	30	100.0



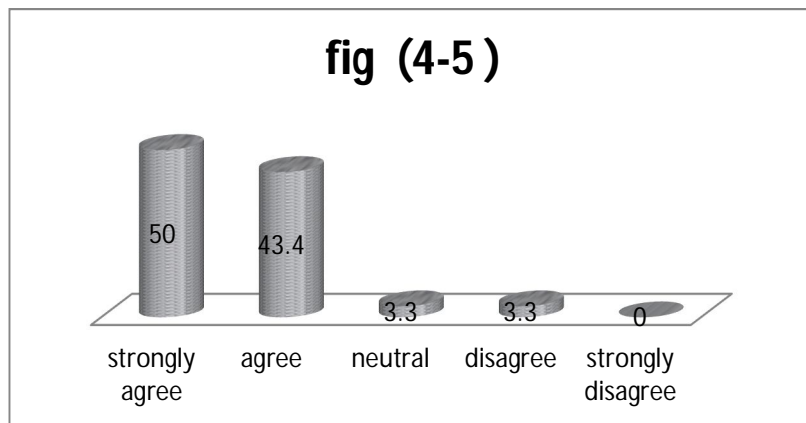
It is clear from the above table No. (4-4) and figure No (4-4) that there are (13) respondents in the study's sample with percentage (34.4%) strongly agreed with that “Some pronunciation’s errors can be attributed to the ways of teaching. ”. There are (10) respondents with percentage (33.3%) agreed with that, and (3) respondents with percentage (10.0%) were not sure that, and (3) respondents with percentage (10.0%) disagreed. and (1) respondents with 3.3% are strongly disagree.

Statement No. (5): Some pronunciation’s errors can be attributed to the ways of teaching.

Table No.(4-5)

The Frequency Distribution for the Respondents’ Answers of statement No. (5)

Valid	Frequency	Percent%
strongly agree	15	50
agree	13	43.4
neutral	1	3.3
disagree	1	3.3
strongly disagree	0	0
Total	30	100.0



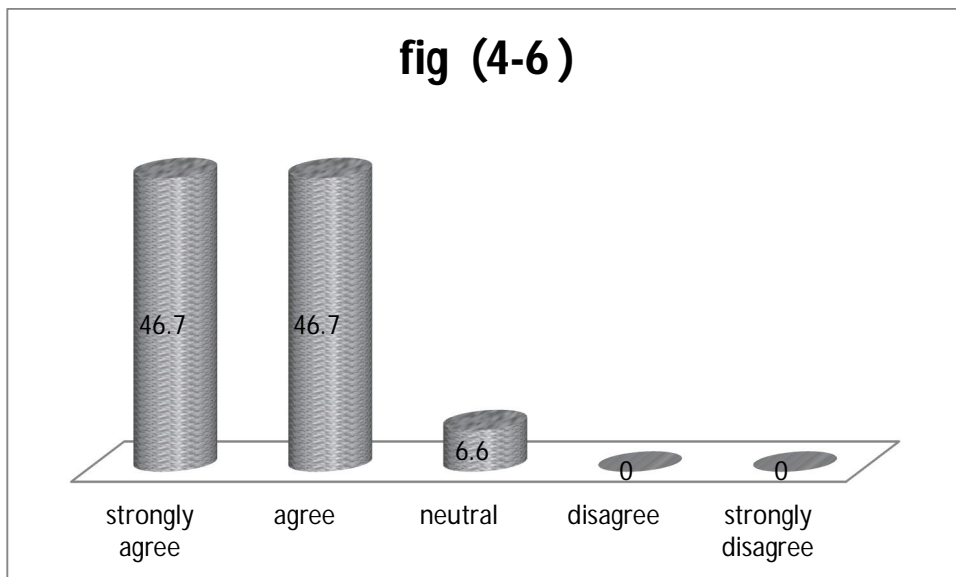
It is clear from the above table No. (4-5) and figure No (4-5) that there are (15) participants in the study's sample with percentage (50.0%) strongly agreed with

that " The students substitute the voiced bilabial /b/ for the bilabial voiceless /p/ in words like: play important , cup . ". There are (13) respondents with percentage (43.4%) agreed with that, and (1) respondents with percentage (3.3%) were not sure that, and (1) respondents with percentage (3.3%) disagreed. and (0) respondents with 0% are strongly disagree

Statement No. (6):Students substitute the labiodentals fricative /f/ in for the voiced /v/ this error occurs due to the absence of /v/ in the Arabic phonological system.

Table No (4-6)
The Frequency Distribution for the Respondents' Answers of Statement No. (4-6)

Valid	Frequency	Percent%
strongly agree	14	46.7
agree	14	46.7
neutral	2	6.6
disagree	0	0
strongly disagree	0	0
Total	30	100.0



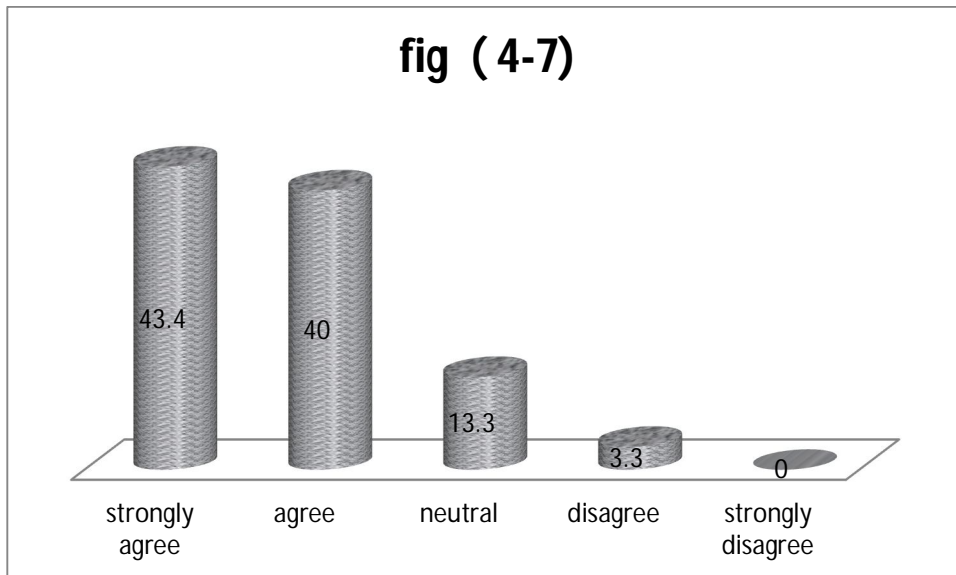
It is clear from the above table No. (4-6) and figure No (4-6) that there are (14) persons in the study's sample with percentage (46.7%) strongly agreed with “Students substitute the labiodentals fricative /f/ in for the voiced /v/ this error occurs due to the absence of /v/ in the Arabic phonological system. ”. There are (14) participants with percentage (46.7%) agreed with that, and (2) participants with percentage (6.7%) were not sure that, and (0) participants with percentage (0.0%) disagreed. and (0) participants with 0% are strongly disagree

Statement No. (7):Students face difficulties in learning stress at sentence level.

Table No (4-7)

The Frequency Distribution for the Respondents’ Answers of Statement No. (4-7)

Valid	Frequency	Percent%
strongly agree	13	43.4
agree	12	40
neutral	4	13.3
disagree	1	3.3
strongly disagree	0	0
Total	30	100.0

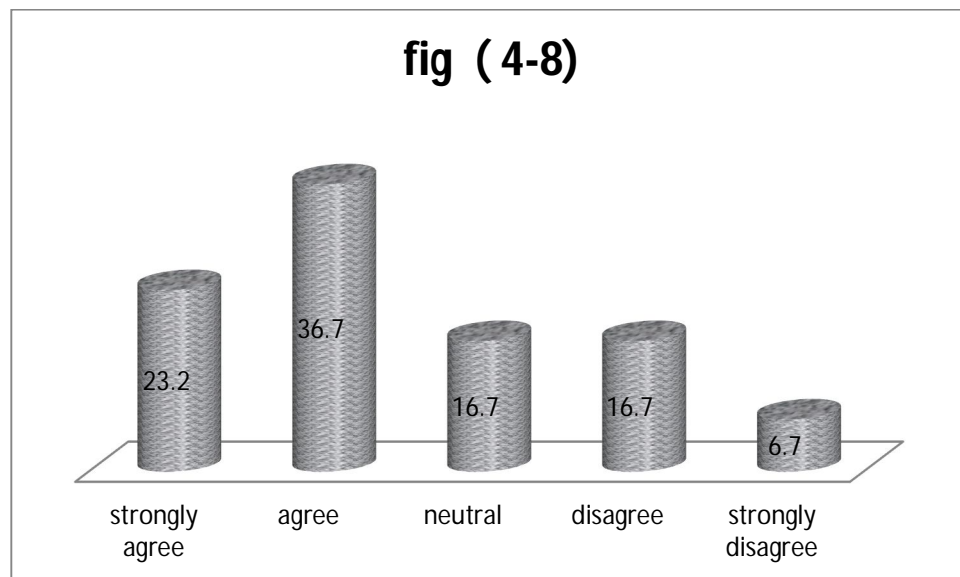


It is clear from the above table No. (4-7) and figure No (4-7) that there are (13) participants in the study's sample with percentage (43.4%) strongly agree with "Students face difficulties in learning stress at sentence levels. ". There are (12) participants with percentage (40.0%) agreed with that, and (4) participants with percentage (13.3%) were not sure that, and (1) participants with percentage (3.3%) disagreed. and (0) participants with 0% are strongly disagree.

Statement No. (8):Sudanese teachers of English languages can also be part of mispronunciation's problem.

Table No (4-8)
The Frequency Distribution for the Respondents' Answers of statement No. (8)

Valid	Frequency	Percent%
strongly agree	7	23.2
agree	11	36.7
neutral	5	16.7
disagree	5	16.7
strongly disagree	2	6.7
Total	30	100.0

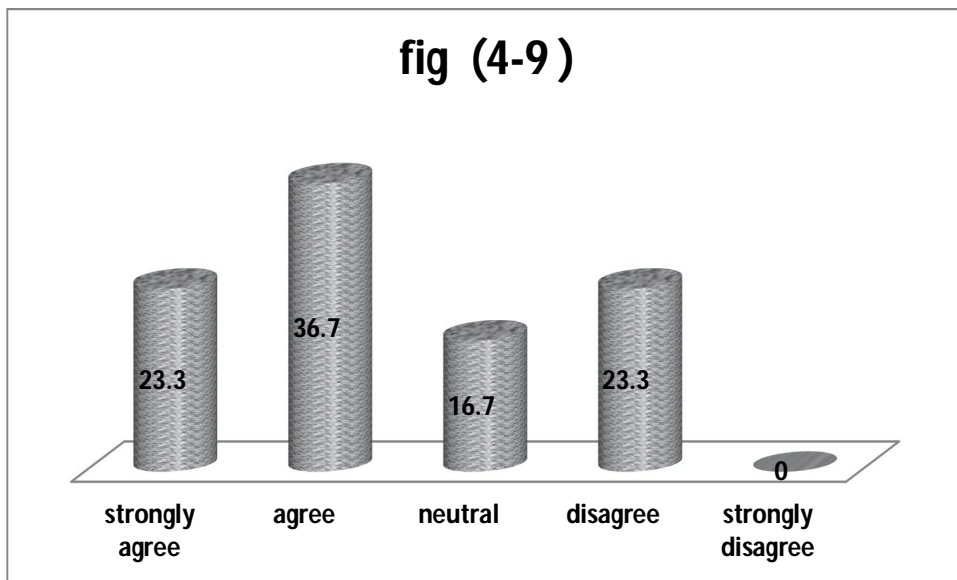


It is clear from the above table No. (4-8) and figure No (4-8) that there are (7) respondents in the study's sample with percentage (23.2%) strongly agreed with " Sudanese teachers of English languages can also be part of mispronunciation's problem. ". There are (11) respondents with percentage (36.7%) agreed with that, and (5) respondents with percentage (16.7%) were not sure that, and (5) respondents with percentage (16.7%) disagreed. and (2) respondents with 6.7% are strongly disagree

Statement No(9):Soft 'g' /dʒ/ and hard are problematic for the students they sometimes pronounce /g/ as in geography

Table No (4-9)
The Frequency Distribution for the Respondents' Answers of Statement No. (9)

Valid	Frequency	Percent%
strongly agree	7	23.3
agree	11	36.7
neutral	5	16.7
disagree	7	23.3
strongly disagree	0	0
Total	30	100.0

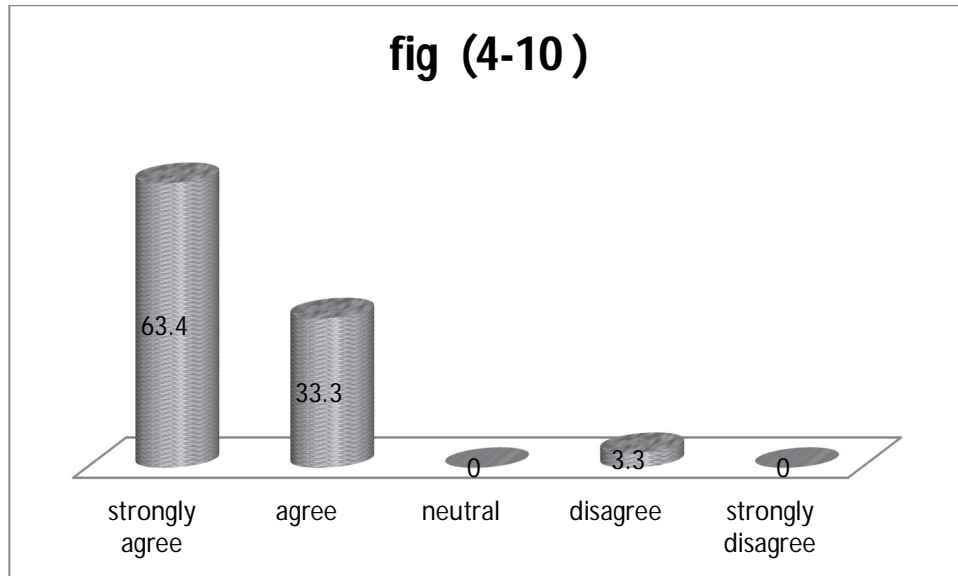


It is clear from the above table No.(4-9) and figure No (4-9) that there are (7) respondents in the study's sample with percentage (23.2%) strongly agreed with " Soft 'g' /dʒ/ and hard are problematic for the students they sometimes pronounce /g/ as in geography ". There are (11) respondents with percentage (36.7%) agreed with that, and (5) respondents with percentage (16.7%) were not sure that, and (7) respondents with percentage (23.3%) disagreed. and (0) respondents with 6.7% are strongly disagree.

Statement No(10):Some students mispronounce the soft 'C' /s/ and hard 'C' /k/ in some words like (implicit).

Table No (4-10)
The Frequency Distribution for the Respondents' Answers of statement No. (10)

Valid	Frequency	Percent%
strongly agree	19	63.4
agree	10	33.3
neutral	0	0
disagree	1	3.3
strongly disagree	0	0
Total	30	100.0



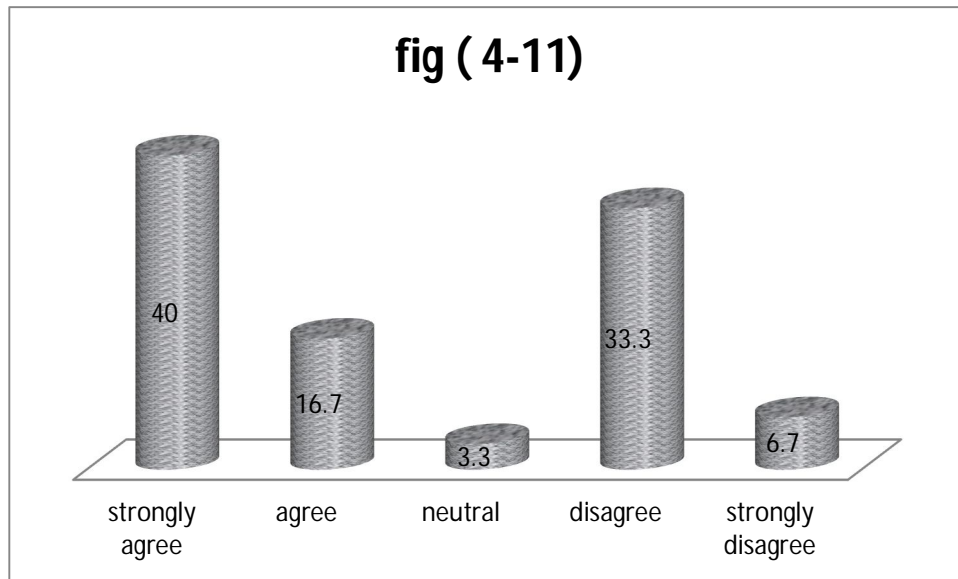
It is clear from the above table No. (4-10) and figure No (4-10) that there are (19) participants in the study's sample with percentage (63.4%) strongly agreed with " Some students mispronounce the soft 'C' /s/ and hard 'C' /k/ in some words like (implicit). ". There are (10) participants with percentage (33.3%) agreed with that, and (0) participants with percentage (0.0%) were not sure that, and (1) participants with percentage (3.3%) disagreed. and (0) participants with 0.0% are strongly disagree.

Statement (11):Students mispronounce /θ/ in word like there ... mathematic
Month

Table No (4-11)
The Frequency Distribution for the Respondents' Answers of Statement No. (11)

Valid	Frequency	Percent
strongly agree	12	40.0
agree	5	16.7
neutral	1	3.3
disagree	10	33.3
strongly disagree	2	6.7
Total	30	100.0

Source: The researcher from applied study, SPSS 24



Source: The researcher from applied study, SPSS 24

It is clear from the above table No. (4-11) and figure No (4-11) that there are (12) participants in the study's sample with percentage (40.0%) strongly agreed with Students mispronounce /θ/ in word like there ... mathematic Month". There are (5) participants with percentage (16.7%) agreed with that, and (1) participants with percentage (3.3%) were not sure that, and (10) participants with percentage (33.3%) disagreed. and (2) participants with 6.7% are strongly disagree.

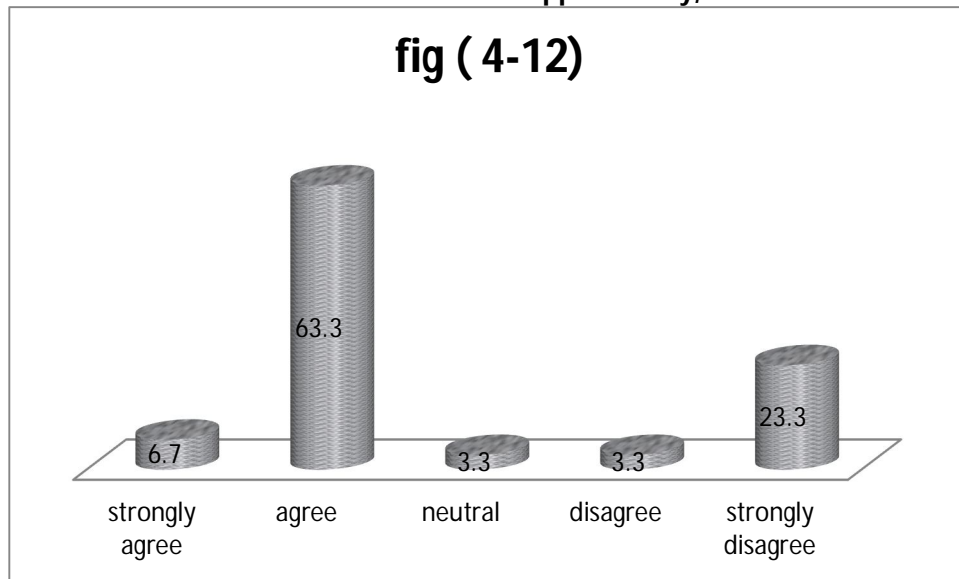
Statement No. (12): Student mispronounces /O/ in words like this... Brother breathe

Table No (4-12)

The Frequency Distribution for the Respondents' Answers of Statement No. (12)

Valid	Frequency	Percent
strongly agree	2	6.7
agree	19	63.3
neutral	1	3.3
disagree	1	3.3
strongly disagree	7	23.3
Total	30	100.0

Source: The researcher from applied study, SPSS 24



Source: The researcher from applied study, SPSS 24

It is clear from the above table No.(4-12) and figure No (4-12) that there are (2) respondents in the study's sample with percentage (6.7%) strongly agreed with " Student mispronounce /O/ in words like this .. brother breathe ". There are (19) respondents with percentage (63.3%) agreed with that, and (1) respondents with percentage (3.3%) were not sure that, and (1) respondents with percentage (33.3%) disagreed. and (7) respondents with 23.3% are strongly disagree

Hypotheses testing by using chi-square test

Table No. (4-13)

Chi-Square Test Results for Respondents' Answers of the Questions of the Hypothesis: English languages 3rd – level students at college of languages make pronunciation's errors when they speak in English .

Nom .	Statement	mean	SD	Chi square	p-value
1	English language is complicated because orthography does not reflect the pronunciation.	2.7	1.8	36	0.000
2	University syllabus does not sufficiently demonstrate pronunciation drills and exercise.	2.3	0.5	32	0.000

3	The students lack the basic knowledge of sound system of English phonetics and phonology.	2.3	0.7	23	0.000
4	Some pronunciation's errors can be attributed to the ways of teaching.	1.7	2.7	26	.000

Source: The researcher from applied study, SPSS 24

The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (1) question was (36) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "English language is difficult because the pronunciation of words is not clearly shown by how they written.

The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (2) question was (32) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "University syllabus does not sufficiency cover pronunciation drills and exercise.

The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (3) question was (23) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support

the respondent who agreed with the statement “The students lack the basic knowledge of sound system of English phonetics and phonology.

The calculated value of chi-square for the significance of the differences for the respondents’ answers in the No (4) question was (26) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement “Some pronunciation’s errors can be attributed to the ways of teaching.

According to the previous result we can say that the first hypothesis of our study is accepted and it’s true that English languages 3rd – level students at college of languages make pronunciation’s errors when they speak in English .

Table No. (4-14)
Chi-Square Test Results for Respondents’ Answers of the Questions of the Hypothesis:3rd year level students of English languages make mother tongue interference when speaking in English

Nom.	Statement	mean	SD	Chi square	p-value
1	The students substitute the voiced bilabial /b/ for the bilabial voiceless /p/ in words like: play, important, cup.	2.2	0.6	22	0.00
2	Students substitute the labiodentals fricative /f/ in for the voiced /v/ this error occurs due to the absence of /v/ in the Arabic phonological system.	2.6	0.8	27.7	0.00
3	Students face difficulties in learning stress at sentence levels.	2.4	0.9	25.7	0.001
4	Sudanese teachers of English	3	2.8	22	0.001

languages can also be part of mispronunciation's problem.				
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Source: The researcher from applied study, SPSS 24

- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (1) question was (22) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "The students substitute the voiced bilabial /b/ for the bilabial voiceless /p/ in words like: play important , cup .
- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (3) question was (25.7) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Students substitute the labiodentals fricative /f/ in for the voiced /v/ this error occurs due to the absence of /v/ in the Arabic phonological system..
- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (3) question was (27.7) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Students face difficulties in learning stress at sentence levels.

- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (4) question was (22) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Sudanese teachers of English languages can also be part of mispronunciation's problem.

According to the previous result we can say that thesecond hypothesis of our study is acceptedand it's true that 3rd year level students of English languages make mother tongue interference when speaking in English.

Table No. (4-15)

Chi-Square Test Results for Respondents' Answers of the Questions of the Hypothesis:some type of phonemes are considered as the most difficult phones for those students when they pronounce English words

Nom	Statement	mean	SD	Chi square	p-value
1	Soft 'g' /dʒ/ and hard are problematic for the students they some times pronounce /g/ as in geography	2.5	0.4	25	0.00
2	Some students mispronounce the soft 'C' /s/ and hard 'C' /k/ in some words like (implicit).	3.0	0.7	27.5	0.00
3	Students mispronounce /θ/ in word like there ... mathematic Month	2.7	0.6	24	0.00
4	Student mispronounce /O/ in words like this .. brother breathe	2.6	.8	23	0.00

Source: The researcher from applied study, SPSS 24

- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (1) question was (25) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondents who agreed with the statement "Soft 'g' /dʒ/ and hard are problematic for the students they sometimes pronounce /g/ as in geography.

- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (2) question was (27.5) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Some students mispronounce the soft 'G' /s/ and hard 'C' /k/ in some words like (implicit)..

- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (3) question was (24) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Students mispronounce /θ/ in word like there ... mathematic
Month.

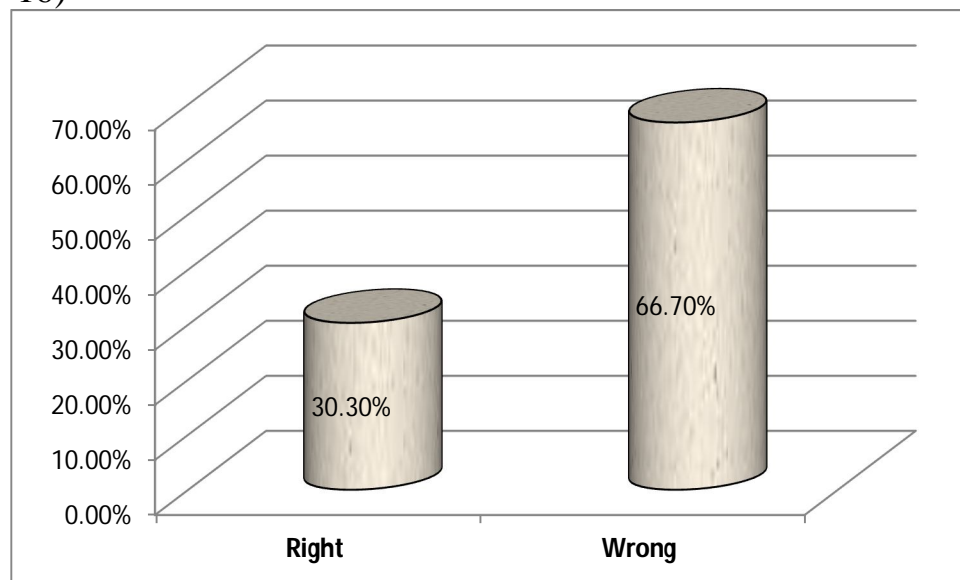
- The calculated value of chi-square for the significance of the differences for the respondents' answers in the No (4) question was (23) which is greater than the tabulated value of chi-square at the degree of freedom (4) and the significant value level (5%) which was (6.5). this indicates that, there are statistically significant differences at the level (5%) among the answers of the respondents, which support the respondent who agreed with the statement "Student mispronounce /O/ in words like this .. Brother breathes. According to the previous result we can say that the third hypothesis of our study is accepted and it's true some type of phonemes are considered as the most difficult phones for those students when they pronounce English words.

Mother tongue interference causes pronunciation problems for 3rd level students majoring in English at SUST in terms of consonants ,and stress.

Table (4-16) Show the distribution of The means for the correct and right answers in question (1)

Answer	Means	Percentage
Right	2	30.3%
Wrong	4	66.7%
Total	6	100%

Figure (4-16)

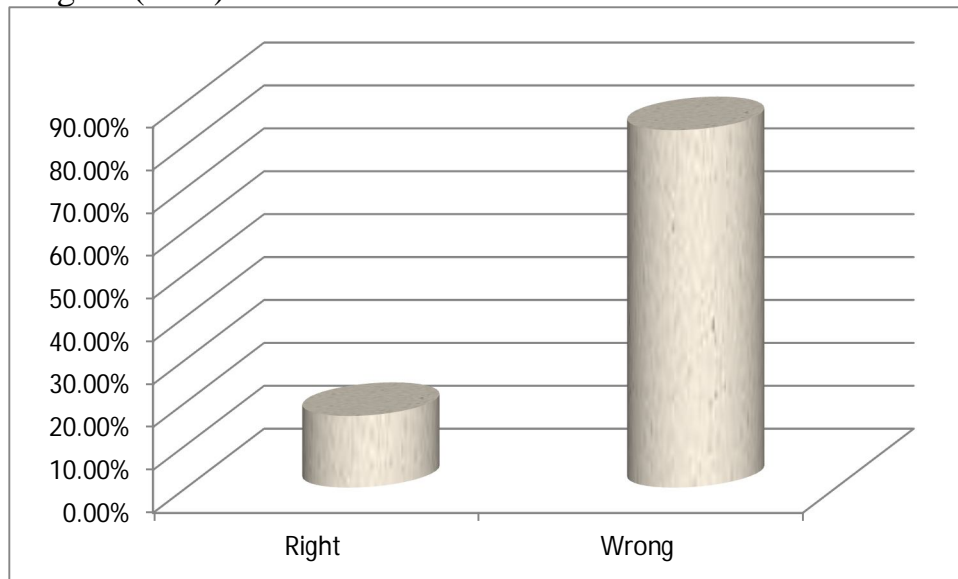


From the above table No.(4-16) and figure No (4-16) its shown that the mean of correct answers was only (2) with percentage (30.3 %) and the mean of the wrong answers was (4) with percentage (66.7)

Table (4-17) show the distribution of The means for the correct and right answers in question (2)

Answer	Means	Percentage
Right	1	16.7%
Wrong	5	83.3%
Total	6	100%

Figure (4-17)

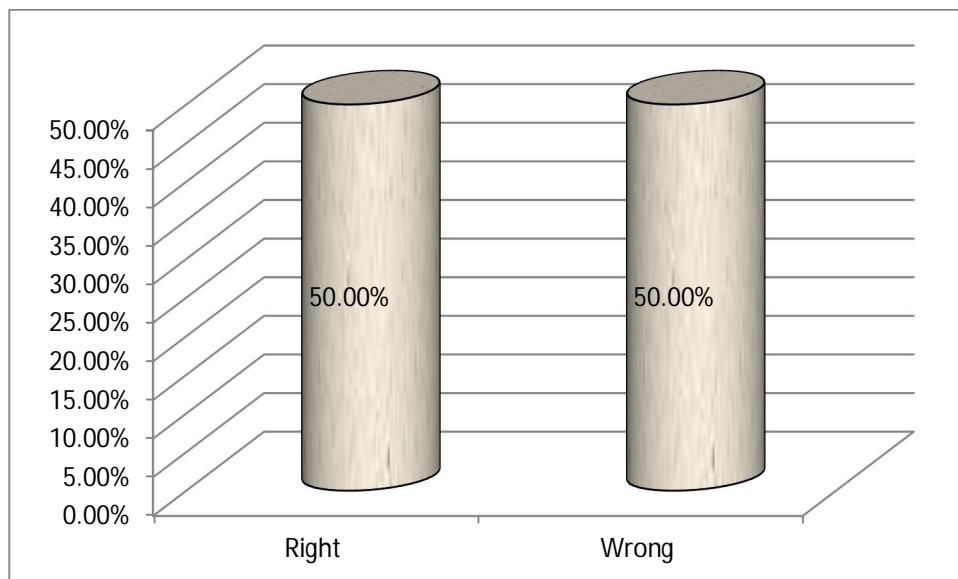


From the above table No.(4-17) and figure No (4-17) its shown that the mean of correct answers was only (1) with percentage (16.7 %) and the mean of the wrong answers was (5) with percentage (83.3)

Table (4-18) show the distribution of the means for the correct and right answers in question (3)

Answer	Means	Percentage
Right	3	50.0%
Wrong	3	50.0%
Total	6	100%

Figure (4-18)



From the above table No.(4-18) and figure No (4-18) its shown that the mean of correct answers was only (3) with percentage (50.0 %) and the mean of the wrong answers was (3) with percentage (50.0 %)

Table (4-19) one sample T-TEST for the questions of the study

Question s	N	mean	SD	t-value	DF	p-value
1	20	2	0.2	12.6	19	0.00
2	20	1	1.81	7.4	19	0.00
3	20	3	2.44	8.12	19	0.00
For all	20	1.5	4.03	15.50	19	0.00

The calculated value of T – TEST for the significance of the differences for the respondent’s answers in the question No (1) was (12.6) which is greater than the tabulated value of T – TEST at the degree of freedom (19) and the significant value level (0.05%) which was (2.34). This indicates that, there are no statistically significant differences at the level (0.05 %) among the answers of the respondents.

The calculated value of T – TEST for the significance of the differences for the respondent’s answers in the question No (1) was (7.4) which is greater than the tabulated value of T – TEST at the degree of freedom (19) and the significant value level (0.05%) which was (2.34). This indicates that, there are statistically significant differences at the level (0.05 %) among the answers of the respondents. this mean that our second hypothesis is accepted.

The calculated value of T – TEST for the significance of the differences for the respondent’s answers in the question No (3) was (8.12) which is greater than the tabulated value of T – TEST at the degree of freedom (19) and the significant value level (0.05%) which was (2.34). This indicates that, there are statistically significant differences at the level (0.05 %) among the answers of the respondents.

The previous results indicate that our hypotheses is accepted