

CHAPTER FOUR

RESULT

This chapter reports the results of the study according to the research questions. They are presented as follows:

4.1 FINDINGS OF RESEARCH QUESTION ONE:

Is the Chomskian technique for teaching present simple yes/no questions and negatives effective to improve the students' comprehension and production?

The effectiveness of the Chomskian technique can be identified by mean scores of the pretest, posttest and delayed posttest, and mean correct percentages of comprehension and production from the pretest, posttest and delayed posttest.

4.1.1 Mean Scores of the Pretest, Posttest and Delayed Posttest

To prove that the performances of M.1/1 and M.1/2 were more or less the same, an Independent-Sample t-test was performed. Consequently, they were assigned to be the control group and experimental group and then they were comparable in terms of progress.

$$H_0 = \mu_1 = \mu_2$$
$$\alpha = 0.05$$

Table 1 Comparison of the Pretest Scores Between the Control Group and the Experimental Group

Group Statistics

Group	Mean	N	Std. Deviation	t-value	df	Sig. (2-tailed)
Pretest	1 5.3485	33	1.70699	-.111	68	.912
	2 5.3919	37	1.56407			

* $p \leq 0.05$.

Table 1 shows that $.05 t_{68} > -.111$ and the hypothesis is accepted. Thus, on the average the pretest scores of the control group ($X = 5.3485$, $SD = 1.70699$) and the

experimental group ($X = 5.3919$, $SD = 1.56407$) are not significantly different ($\alpha = 0.05$). This means that on average their pretest scores are more or less the same.

After the two groups were taught by two different techniques, the conventional technique for the control group and the Chomskian technique for the experimental group, their progress was measured by the posttest. Paired-Sample t-test was employed to find the difference between the pretest and the posttest scores for each group. Table 2 and Table 3 show their posttest scores compared with their pretest scores.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 2 Comparison of the Pretest and Posttest Scores of the Control Group

Paired Samples Statistics

		Mean	N	Std. Deviation	t-value	df	Sig. (2-tailed)
Pair 1	Pre1	5.3485	33	1.70699	-3.294	32	.002
	Post1	7.0152	33	2.67945			

* $p \leq 0.05$.

Table 2 shows that $.05 \ t_{32} < -3.294$, and the hypothesis is rejected. Thereby, on average, the pretest score ($X = 5.3485$, $SD = 1.70699$) and the posttest score ($X = 7.0152$, $SD = 2.67945$) of the control group are significantly different ($\alpha = 0.05$). It means that, on average, the posttest score of the control group is higher than their pretest score.

Table 3 Comparison of the Pretest and Posttest Scores of the Experimental Group

Paired Samples Statistics

		Mean	N	Std. Deviation	t-value	df	Sig. (2-tailed)
Pair 2	Pre1	5.3919	37	1.56407	-12.757	36	.000
	Post1	13.4459	37	3.39689			

* $p \leq 0.05$.

From Table 3, it shows that $.05 t_{36} < -12.757$, and the hypothesis is rejected. Thereby, on average, the pretest score ($X= 5.3919$, $SD= 1.56407$) and the posttest score of the experimental group ($X= 13.4459$, $SD= 3.39686$) are significantly different ($\alpha = 0.05$). This means that, on average the posttest score of the experimental group is considerably higher than their pretest score.

Then to compare the progress of the two groups after they learned by two different techniques, an Independent-Sample t-test was performed.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 4 Comparison of the Posttest Scores Between the Control Group and the Experimental Group

Group Statistics

Group		N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Posttest	Control	33	7.0152	2.67945	-8.720	68	.000
	Experimental	37	13.4459	3.39686			

* $p \leq 0.05$.

Table 4 shows that $.05 t_{68} < -8.720$, and the hypothesis is rejected. Therefore, on average, the posttest score of the control group ($X= 7.0152$, $SD= 2.67945$) and that of the experimental group ($X= 13.4459$, $SD= 3.39686$) are significantly different ($\alpha = 0.05$). This means that, on average, the posttest score of the experimental group is significantly higher than that of the control group.

To look for prolonged or more long term effects of the different teaching techniques, a delayed posttest was administered two weeks after the posttest. Then to find whether there was a significant difference between the posttest and delayed

posttest scores of both two groups, a Paired-Sample t-test was employed. The result of the control group is showed in Table 5, and the experimental group in Table 6.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 5 Comparison of the Posttest and Delayed Posttest Scores of the Control Group

Paired Samples Statistics

		N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pair 1	Posttest	33	7.0152	2.67945	2.242	32	.032
	Delayed Posttest	33	5.2424	3.13279			

* $p \leq 0.05$.

Table 5 presents that $.05 t_{32} < 2.242$, and the hypothesis is rejected. Thus, on average the posttest score ($X= 7.0152$, $SD= 2.67945$) and the delayed posttest score ($X= 5.2424$, $SD= 3.13279$) of the control group were significantly different ($\alpha = 0.05$). It means that, on average the posttest score of the control group is higher than their delayed posttest score.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 6 Comparison of the Posttest and Delayed Posttest Scores of the Experimental Group

Paired Samples Statistics

		N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pair 2	Posttest	37	13.4459	3.39686	1.156	36	.255
	Delayed Posttest	37	12.4595	3.76825			

* $p \leq 0.05$.

From Table 6, it shows that $.05 t_{36} > 1.156$, and the hypothesis is accepted. Thereby, on average the posttest score ($X= 13.4459$, $SD= 3.39686$) and the delayed

posttest score of the experimental group ($X= 12.4595$, $SD= 3.76825$) are significantly different ($\alpha = 0.05$). This means that on average the posttest score and the delayed posttest score of the experimental group are more or less the same.

Lastly, an Independent-Sample t-test was performed in order to compare the performances on the delayed posttest of the two groups' learning by the two different techniques.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 7 Comparison of the Delayed Posttest Scores Between the Control Group and the Experimental Group

Group Statistics							
Group		N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Delayed Posttest	Control	33	5.2424	3.13279	-8.652	68	.087
	Experimental	37	12.4595	3.76825			

* $p \leq 0.05$.

Table 7 shows that $.05 t_{68} < 8.652$, and the hypothesis is rejected. Therefore, on the average the delayed posttest score of the control group ($X= 5.2424$, $SD= 3.13279$) and that of the experimental group ($X= 12.4595$, $SD= 3.76825$) were significantly different ($\alpha = 0.05$). This means that, on average, the delayed posttest score of the experimental group was higher than that of the control group.

4.2 FINDINGS OF RESEARCH QUESTION TWO:

Can the Chomskian technique help to reduce the common errors found in present simple yes/no questions and negatives?

4.2.1 Error Analysis of Present Simple Yes/No question and Negative

The result in Table 8 illustrates two common errors of the present simple yes/no question and negative made by the control and the experimental group subjects in the pretest, posttest and delayed posttest. The errors were calculated in percentages from all of the responses.

Table 8 Percentages of Errors in Present Simple Yes/No Question and Negative

Errors Type	Control Group			Experimental Group		
	Pretest	Posttest	Delayed Posttest	Pretest	Posttest	Delayed Posttest
Mismatch of Do and Does	15%	30%	28%	11%	3%	6%
Doubling Errors	38%	12%	19%	36%	9%	10%

Both error types, ‘mismatch of do and does’ and ‘doubling errors’ were found from the production task from pretest, posttest and delayed posttest. As seen from Table 7, percentages of ‘mismatch of do and does’ made by the control group in the posttest (30%) and the delayed posttest (28%) are higher than the pretest (15%). However, they made ‘doubling errors’ in the posttest (12%) less than they did in the pretest (38%). So the percentage of the ‘doubling errors’ found in the delayed posttest (19%) is slightly higher than that of the posttest (12%).

Compared with the experimental group, the percentages of making both errors in the posttest and delayed posttest are less than they did in the pretest. They ‘mismatched do and does’ 11% in the pretest, and 3% in the posttest, and in the delayed posttest 6%. Then they made doubling errors 36%, 9% and 10% in the pretest, posttest and delayed posttest respectively.

4.3 FINDINGS OF RESEARCH QUESTION THREE:

What are the relationships between the students' comprehension and production of subject-verb agreement in present simple yes/no questions and negatives?

Table 9 Comparison Between Comprehension and Production of Present Simple Yes/No Question and Negative of the Control Group and the Experimental Group

Sentence Type	Group	Test	Comprehension	Production
Yes/No Question	Control Group	Pretest	26.51	12.12
		Posttest	32.57	27.27
		Delayed Posttest	26.52	36.36
	Experimental Group	Pretest	24.32	12.16
		Posttest	79.72	83.78
		Delayed Posttest	77.02	80.40
Negative	Control Group	Pretest	29.54	13.64
		Posttest	29.54	40.15
		Delayed Posttest	34.85	33.33
	Experimental Group	Pretest	29.72	20.94
		Posttest	75.67	83.78
		Delayed Posttest	74.32	79.72

Table 9 above illustrates the comparisons of mean correct percentages of comprehension and production of subject-verb agreement in the present simple yes/no question and negative of the control group on the pretest, posttest and delayed posttest. To discover if the patterns of relationships of subject-verb agreement in present simple yes/no questions and negatives of the two groups differ in the pretest, posttest and delayed posttest, a Paired-Sample t-test was performed to determine whether the comprehension and production are significantly different.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 10 Comparison Between Comprehension and Production of Present Simple Yes/No Question of the Control Group

Paired Samples Statistics

			N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pretest	Pair 1	Comprehension	33	1.0606	.86384	3.532	32	.001
		Production		.4848	.50752			
Posttest	Pair 2	Comprehension		1.3030	1.01504	.793		.433
		Production		1.0909	1.15552			
Delayed posttest	Pair 3	Comprehension		1.0606	.99810	-1.978		.057
		Production		1.4545	1.03353			

* $p \leq 0.05$.

Table 10 demonstrates Pair 1 that $.05 t_{32} < 3.532$, and the hypothesis is rejected. Therefore, on average the control group's comprehension score ($X=1.0606$, $SD=.86384$) and production score ($X=.4848$, $SD=.50752$) were significantly different ($\alpha = 0.05$). This means that, on average their comprehension score was higher than their production score on the pretest. Next is Pair 2; this table shows that $.05 t_{32} > .793$, and the hypothesis is accepted. Thus, on average their comprehension score ($X=1.3030$, $SD=1.01504$) and production score ($X=1.0909$, $SD=1.15552$) are not significantly different ($\alpha = 0.05$). This means that on average their comprehension and production scores are more or less the same. Lastly, for Pair 3, $.05 t_{32} > -1.978$, and the hypothesis is accepted also. Hence, on average the control group's comprehension score ($X=1.0606$, $SD=.99810$) and production score ($X=1.4545$, $SD=1.03353$) are not significantly different. This means that on average the comprehension and production score of the control group on the delayed posttest were more or less the same.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 11 Comparison Between Comprehension and Production of Present Simple Yes/No Question of the Experimental Group

Paired Samples Statistics

			N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pretest	Pair 1	Comprehension	37	.9730	.95703	2.530	36	.016
		Production		.4865	.60652			
Posttest	Pair 2	Comprehension		3.1892	1.19810	-.896		.376
		Production		3.3243	1.15600			
Delayed posttest	Pair 3	Comprehension		3.0811	1.13965	-.352		.727
		Production		3.1622	1.28048			

* $p \leq 0.05$.

Table 11 illustrates that $.05 t_{36} < 2.530$ for Pair 1, and the hypothesis is rejected. Thereby, on average comprehension scores ($X = .9730$, $SD = .95703$), and the production scores ($X = .4865$, $SD = .60652$) of the experimental group on the pretest are significantly different ($\alpha = 0.05$). This means that, on average, the comprehension scores of the subjects in this group were higher than their production scores on the pretest. For Pair 2, the table shows that $.05 t_{36} > -.896$, and the hypothesis is accepted. Therefore, on average the comprehension score ($X = 3.1892$, $SD = 1.19810$) and the production score ($X = 3.3243$, $SD = 1.15600$) of the experimental group subjects in the posttest were not significantly different ($\alpha = 0.05$). This means that, on average, their comprehension and production scores on the posttest were more or less the same. Then, for Pair 3, the table shows $.05 t_{36} > -.352$, and the hypothesis is accepted. Thus, on average the comprehension score ($X = 3.0811$, $SD = 1.13965$) and the production score ($X = 3.1622$, $SD = 1.28048$) of the experimental group on the delayed posttest were not significantly different ($\alpha = 0.05$). This means that, on average, their comprehension and production scores on the delayed posttest are more or less the same.

The two groups' acquisition of subject-verb agreement used in present simple yes/no question and negative are analyzed and illustrated in Table 12 and Table 13 below group by group.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 12 Comparison Between Comprehension and Production of Present Simple Negative of the Control Group

Paired Samples Statistics

			N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pretest	Pair 1	Comprehension	33	1.1818	.95048	3.130	32	.004
		Production		.5455	.75378			
Posttest	Pair 2	Comprehension		1.1818	.88227	-1.875		.070
		Production		1.6061	1.14399			
Delayed posttest	Pair 3	Comprehension		1.3939	.99810	.360		.721
		Production		1.3333	1.05079			

* $p \leq 0.05$.

Table 12 demonstrates that for Pair1, $.05 t_{32} < 3.130$, and the hypothesis is rejected. Consequently, on average, the comprehension score of the control group ($X=1.1818$, $SD=.95048$), and the production score ($X=.5455$, $SD=.75378$) on the pretest are significantly different ($\alpha = 0.05$). It means that, generally speaking, their comprehension is higher than their production score. Next is Pair 2, the table shows $.05 t_{32} > -1.875$ and the hypothesis is accepted. Thus, on average, their comprehension score ($X=1.1818$, $SD=.88227$) and the production score ($X=1.6061$, $SD=1.14399$) on the posttest are not significantly different ($\alpha = 0.05$). Generally speaking, it means that their comprehension score is more or less the same. For Pair 3, the table shows $.05 t_{32} > .360$, and the hypothesis is accepted. Thus, the control's group score ($X=1.3939$, $SD=.99810$) and the production score ($X=1.3333$, $SD=1.05079$) on the delayed posttest are not significantly different ($\alpha = 0.05$). It means that their

comprehension and production scores on the delayed posttest are more or less the same.

$$H_0 = \mu_1 = \mu_2$$

$$\alpha = 0.05$$

Table 13 Comparison Between Comprehension and Production of Present Simple Negative of the Experimental Group

Paired Samples Statistics

			N	Mean	Std. Deviation	t-value	df	Sig. (2-tailed)
Pretest	Pair 1	Comprehension	37	1.1892	.84452	1.806	36	.079
		Production		.8378	.89795			
Posttest	Pair 2	Comprehension		3.0270	1.21304	-2.517		.016
		Production		3.3514	1.03323			
Delayed posttest	Pair 3	Comprehension		2.9730	1.18992	-.870		.390
		Production		3.1892	1.19810			

* $p \leq 0.05$.

Table 13 demonstrates that for Pair 1, $.05 t_{36} > 1.806$, and the hypothesis is accepted. Hence, the comprehension score ($X= 1.1892$, $SD= .84452$) and the production score ($X= .8378$, $SD= .89795$) of the experimental group on the pretest are not significantly different ($\alpha = 0.05$). The conclusion is that, on the pretest, the experimental group subjects' comprehension and production were more or less the same. Then, for Pair 2, $.05 t_{36} < -2.517$, and the hypothesis is rejected. Thus, the comprehension score ($X= 3.0270$, $SD= 1.21304$) and the production score ($X= 3.3514$, $SD= 1.03323$) are significantly different ($\alpha = 0.05$). This indicates that on the posttest, their production score is higher than their comprehension score. Lastly, for Pair 3, $.05 t_{36} > -.870$, and the hypothesis is accepted. Therefore, the comprehension score ($X= 2.9730$, $SD= 1.18992$) and the production score ($X= 3.1892$, $SD= 1.19810$) of the experimental group are not different significantly ($\alpha = 0.05$). This tells us that their comprehension and production scores on the delayed posttest were more or less the same.