

CHAPTER III



COLLECTING THE DATA AND PRESENTATION

The writer asked Archarn Thompson, to be an informant. The informant recorded the aural perception test on a tape recorder. Three sentences are read in normal speed without repetition. After the first half of 50 items there are two minutes intermission, and then the test is continued to the end.

In regard to administering the test to the students, the answer sheets were passed out to everybody, then the students were asked to fill out everything on the upper side. The writer clarified how to do the test item and gave some examples until they had no question. Then all the students in the room were asked to sit around the tape recorder. When the tape recorder was turned on, the students marked the answer sheets. The writer tested three groups each day, and it took three days to test all nine groups at Sansomedj Teacher Training College.

Having finished the testing, the writer classified the students into regions. Those students who had lived at least 10 years in their native provinces were classified as a representative of their regions. 324 students took the test, as Table III indicated.

Table III

Number of students classified by sex and regions.

Nb	13
Ng	9
Total	22
NEb	20
NEg	10
Total	30
Sb	23
Sg	5
Total	28
Cb	124
Cg	120
Total	244
Four regions	324

From Table III, it can be seen that there are 244 students from the central region, 28 from the south, 30 from Northeast and 22 from the north. The Total number of students is 324. The numbers of boys or girls, have been clearly indicated in each column. These students are the subjects to be investigated.

In Table IV, the total scores and the means of boys and girl from the North is presented. The mean is calculated from the formula $\frac{\sum X}{N}$ where x = individual score
 score N = number of student.

Table 4

The mean and total scores of the students from the north

	Nb	Ng	total
Number of students	13	9	22
Scores	540	267	807
\bar{x}	41.54	29.67	36.68

From table 4, the mean of girls is lower than the mean of boy, and then it has an effect on the average mean of the two sexes, the total mean is 36.68 and this number will stand for the whole north-group.

Table 5 The mean and total scores of the students from the Northeast.

	NEb	NEg	total
Number of students	20	10	30
Scores	776	335	1,111
\bar{x}	38.80	33.50	37.03

According to table 5, the mean of girls is also lower than the mean of boy. The NEb group has a mean of 38.80, but the NEg group has only 33.50, and the total mean is 37.03

Table 6 The mean and total scores of the students from the South.

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	Sb	Sg	total
Number of students	23	5	28
Scores	909	154	1,063
\bar{x}	39.52	30.80	37.96

From Table 6 which represents the south group at Bansomdej Teacher Training College has the mean of Sb = 39.52 Sg = 30.80 the total mean is 37.96. It is also in this table that the mean of boys is higher than the mean of girls.

Table 7 The mean and total scores of the students from the central region.

	Cb	Cg	total
Number of students	124	120	244
Scores	4,930	4,307	9,237
\bar{x}	39.75	35.89	37.86

From table 7, The mean of Cb is also higher than the mean of Cg and the total mean is 37.86

From table 4-7, it is obviously concluded that the means of boys are higher than the means of girls. The southern group has the highest mean and the Northern group has the lowest mean.

So the total mean of students of the middle class for three groups.

Table 8 The correct percentages of each item of all students ranking from the lowest to the highest percent point (N = 324)

No.	Contrasting sounds	Number of correct answers for each item	Percentages %
30	glue - grew	17	5.25
1	toe - toad	28	8.64
43	calf - cap	29	8.95
93	cuff - cup	30	9.26
95	can - cant	33	10.19
2	meat - mitt	34	10.49
9	bit - bid	36	11.11
36	day - they	36	11.11
15	mitt - myth	38	11.73
25	prayed - played	42	12.96
13	zinc - sink	43	13.27
65	tent - tenth	43	13.27
23	move - moved	44	13.58
24	catch - cash	44	13.58
100	leg - ledge	44	13.58
74	latch - lash	45	13.89
59	led - let	46	14.20
83	pass - path	49	15.12
8	spoon - spool	51	15.74
16	eat - east	51	15.74

Table 18 a (to be(continued)

No.	Contrasting sounds	Number of correct answers for each item	Percentages %
33	face - faith	51	15.74
68	chip - ship	52	16.05
96	age - H	53	16.36
3	long - wrong	55	16.98
18	chain - shane	55	16.98
5	Vine - wine	57	17.59
31	back - bag	63	19.44
90	ton - tongue	64	19.75
28	cats - cat	67	20.68
78	cut - cuts	70	21.60
40	sinner - singer	76	23.46
76	pepper - paper	76	23.46
77	coal - cold	76	23.46
48	ladder - lather	78	24.07
10	I - I'll	80	24.69
72	races - raises	80	24.69
22	lacy - lazy	81	25.00
84	thank - sank	82	25.31
27	goal - gold	83	25.62
44	spoons - spoon	85	26.23



Table 18 b (continued)

No.	Contrasting sounds	Number of correct answers for each item	Percentages %
55	west - vest	87	26.85
12	sledge - sled	93	28.70
73	loved - love	96	29.63
62	aid - age	98	30.25
69	vase - face	98	30.25
91	lodge - lot	98	30.25
81	league - leak	99	30.56
58	bin - bill	101	31.17
86	Dare - their	101	31.17
42	men - man	109	33.64
53	route - lute	109	33.64
52	sheep - ship	110	33.95
99	'em - 'im	113	34.88
39	plow - plowed	115	35.49
34	think - sink	119	36.73
11	robber - rubber	120	37.04
61	bum - bomb	122	37.65
56	sports - supports	124	38.27
97	coach - coat	130	40.12
89	cow - cows	135	41.67

Table 18 (continued)

No.	Contrasting sounds	Number of correct answers for each item	Percentages %
75	clue - crew	139	42.90
50	badge - bag	140	43.21
45	pine - pint	143	44.24
29	Luke - look	145	44.75
46	batch - badge	146	45.06
21	taught - thought	150	46.30
98	fodder - father	150	46.30
80	flight - fright	153	47.22
66	fat - fast	156	48.15
47	mat - match	157	48.46
94	comb - combs	157	48.46
19	V - fee	168	51.85
38	call - crawl	169	52.16
37	kiss - kit	177	54.63
4	cap - cab	179	55.25
17	bigger - beggar	181	55.86
63	peace - peas	181	55.86
54	lab - lap	182	56.17
32	debt - jet	184	56.79
51	soak - sew	188	58.02

Table 18 d

No.	Contrasting sounds	Number of correct answers for each item	Percentages %
87	bass - bat	189	58.33
35	pose - suppose	194	59.88
57	knew - know	196	60.49
85	sports - supports	199	61.42
88	crop - cop	204	62.96
64	coat - goat	205	63.27
14	gap - cap	206	63.58
41	bat - badge	212	65.43
26	laid - led	227	70.06
79	stewed - stood	230	70.99
92	pet - pat	236	72.84
82	Jean - Dean	237	73.15
71	thin - tin	245	75.62
67	hid - head	247	76.23
6	nose - snows	253	78.09
70	bucks - books	262	80.86
60	pie - pipe	267	82.41
7	soap - soup	268	82.72
49	butter - bitter	272	83.95
20	took - tuck	279	86.11

From table 8, it is clearly seen that the lowest percentage is the minimal pairs

glue - grew 5.25%

Then "toe - toad" has 8.64% of corrections. The two pairs "calf - cap" and cuff - cup in item 43 and 93 are nearly equal in difficulty, because the percentage of Correction are 8.95, 9.26 consequently.

The writer recommended that from item number 30 (glue - grew) of 5.25% in table 8 to item number 19 (V - fee) of 51.85% in table 8 are the most problem sounds to be taught and drilled.

The three minimal pairs:-

soap - soup

butter - bitter

took - tuck

are in the last three rows of table 15, it is clearly indicated that, the students can easily distinguish those sound features. Because such contrasting sounds sometimes occur in the Thai language.

Table 9 The Correct answers of each item and percentages of the North students (N = 22)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
1	toe - toad	1	4.55
2	meat - mitt	3	13.64
3	long - wrong	5	22.73
4	cap - cab	12	54.55
5	vine - wine	4	18.18
6	nose - snows	15	68.18
7	soap - soup	21	95.45
8	spoon - spool	-	-
9	bit - bid	3	13.64
10	I - I'll	5	22.73
11	robbar - rubber	5	22.73
12	sledge - sled	6	27.27
13	zine - sink	2	9.09
14	gap - cap	14	63.64
15	mitt - myth	4	18.18
16	eat - east	1	4.55
17	bigger - beggar	9	40.91
18	Chain - Shane	2	9.09
19	V - fee	12	54.55
20	took - tuck	17	77.27

Table 19 a (Table continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
21	taught - thought	10	45.45
22	lacy - lazy	6	27.27
23	move - moved	5	22.73
24	catch - cash	5	22.73
25	prayed - played	4	18.18
26	laid - led	14	63.64
27	goal - gold	3	13.64
28	cats - cat	2	9.09
29	Luke - look	10	45.45
30	glue - grew	2	9.09
31	back - bag	1	4.55
32	debt - jet	12	54.55
33	face - faith	8	36.36
34	tbink - sink	9	40.91
35	pose - suppose	8	36.36
36	Day - they	4	18.18
37	kiss - kit	12	54.55
38	call - crawl	9	40.91
39	plow - plowed	8	36.36
40	sinner - singer	6	27.27

Table 19 b (to be continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
41	bat - badge	12	54.55
42	man - man	10	45.45
43	calf - cap	1	4.55
44	spoons - spoon	4	18.18
45	pine - pint	12	54.55
46	hatch - badge	8	36.36
47	mat - match	11	50.00
48	ladder - lather	6	27.27
49	butter - bitter	21	95.45
50	badge - bag	12	54.55
51	soak - sew	11	50.00
52	sheep - ship	8	36.36
53	route - lute	4	18.18
54	lab - lap	10	45.45
55	West - vest	5	22.73
56	Sports - supports	11	50.00
57	knew - know	16	72.73
58	bin - bill	5	22.73
59	led - let	5	22.73
60	pie - pipe	18	81.82

Table 19 a (continued)

No.	Contrasting sound	Number of correct answer for each item	Percentages %
61	bun - bomb	10	45.45
62	aid - age	6	27.27
63	peace - peas	15	68.18
64	coat - goat	12	54.55
65	tent - tenth	2	9.09
66	fat - fast	12	54.55
67	hid - head	14	63.64
68	Chip - ship	4	18.18
69	vase - face	6	27.27
70	bucks - books	15	68.18
71	thin - tin	18	81.82
72	races - raises	5	22.73
73	loved - love	4	18.18
74	latch - lash	2	9.09
75	clue - crew	11	50.00
76	pepper - paper	3	13.64
77	coal - cold	7	31.82
78	cut - cuts	7	31.82
79	stewed - stood	14	63.64
80	flight - fright	8	36.36



Table 19 a

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
81	league - leak	4	18.18
82	Jean - Dean	15	68.18
83	pass - path	4	18.18
84	thank - sank	8	36.36
85	sports - supports	11	50.00
86	Dare - their	8	36.36
87	bass - bat	11	50.00
88	crop - cop	10	45.45
89	cow - cows	12	54.55
90	ton - tongue	6	27.27
91	lodge - lot	5	22.73
92	pet - pat	16	72.73
93	cuff - cup	1	4.55
94	comb - combs	12	54.55
95	can - cant	2	9.09
96	age - H	2	9.09
97	coach - coat	13	59.09
98	fodder - father	10	45.45
99	'cm - 'in	11	50.00
100	leg - ledge	1	4.55

Table 10 The correct answers of each item and percentages of the Northeast student (N = 30)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
1	toe - toad	4	13.33
2	meat - mitt	3	10.00
3	long - wrong	3	10.00
4	oap - cab	18	60.00
5	vine - wine	5	16.67
6	nose - snows	19	63.33
7	soap - soup	27	90.00
8	spoon - spool	4	13.33
9	bit - bid	6	20.00
10	I - I'll	6	20.00
11	robber - rubber	7	23.33
12	sledge - sled	11	36.67
13	zine - sink	5	16.67
14	gap - cap	18	60.00
15	mitt - myth	2	6.67
16	eat - east	3	10.00
17	bigger - beggar	13	43.33
18	chain - shane	3	10.00
19	V - fee	14	46.67
20	took - tuck	25	83.33

Table 10 a (continued)

No.	Contrasting sound	Number of correct answer for each item	Percentages %
21	taught - thought	12	40.00
22	lacy - lazy	14	46.67
23	move - moved	2	6.67
24	catch - cash	5	16.67
25	prayed - played	5	16.67
26	laid - led	24	80.00
27	goal - gold	10	33.33
28	cats - cat	6	20.00
29	Luke - look	14	46.67
30	glue - grew	2	6.67
31	back - bag	4	13.33
32	debt - jet	10	33.33
33	face - faith	4	13.33
34	think - sink	12	40.00
35	pose - suppose	9	30.00
36	Day - they	5	16.67
37	kiss - kit	15	50.00
38	call - crawl	13	43.33
39	plow - plowed	7	23.33
40	sinner - singer	4	13.33

Table 10 b (continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
41	bat - badge	20	66.67
42	man - man	8	26.67
43	calf - cap	4	13.33
44	spoons - spoon	12	40.00
45	pine - pint	13	43.33
46	batch - badge	16	53.33
47	mat - match	14	46.67
48	ladder - leather	10	33.33
49	butter - bitter	29	96.67
50	badge - bag	14	46.67
51	soak - sew	13	43.33
52	sheep - ship	10	33.33
53	route - lute	10	33.33
54	lab - lap	21	70.00
55	West - Vest	6	20.00
56	Sports - supports	9	30.00
57	knew - know	17	56.67
58	bin - bill	9	30.00
59	led - let	1	3.33
60	pie - pipe	28	93.33

Table 10 (to be continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
61	bum - bomb	11	36.67
62	aid - age	10	33.33
63	peace - peas	17	56.67
64	coat - goat	17	56.67
65	tent - tenth	3	10.00
66	fat - fast	19	63.33
67	hid - head	21	70.00
68	chip - ship	2	6.67
69	vase - face	8	26.67
70	bucks - books	28	93.33
71	thin - tin	20	66.67
72	races - raises	11	36.67
73	loved - love	5	16.67
74	latch - lash	8	26.67
75	clue - crew	12	40.00
76	pepper - paper	9	30.00
77	coal - cold	5	16.67
78	cut - cuts	6	20.00
79	stewed - stood	17	56.67
80	flight - fright	18	60.00

Table 10

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
81	league - leak	12	40.00
82	Jean - Dean	23	76.67
83	pass - path	5	16.67
84	thank - sank	10	33.33
85	sports - supports	19	63.33
86	Dare - their	8	26.67
87	bass - bat	19	63.33
88	Grop - cop	23	76.67
89	cow - cows	17	56.67
90	ton - tongue	3	10.00
91	lodge - lot	5	16.67
92	pet - pot	21	70.00
93	cuff - cup	2	6.67
94	comb - combs	11	36.67
95	can - cant	3	10.00
96	age - H	4	13.33
97	coach - coat	13	43.33
98	fodder - father	15	50.00
99	'cu - 'in	10	33.33
100	leg - ledge	4	13.33

Table 11 The Correct answers of each item and percentages of the South students (N = 28)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
1	toe - toad	-	-
2	meat - mitt	3	10.71
3	long - wrong	8	28.57
4	cap - cab	19	67.86
5	vine - wine	2	7.14
6	nose - snows	22	78.57
7	soap - soup	23	82.14
8	spoon - spool	3	10.71
9	bit - bid	3	10.71
10	I - I'll	13	46.43
11	robber - rubber	10	35.71
12	sledge - sled	8	28.57
13	Zine - sink	2	7.14
14	gap - cap	17	60.71
15	mitt - myth	4	14.29
16	eat - east	2	7.14
17	bigger - beggar	17	60.71
18	Chain - Shane	6	21.43
19	V - fee	13	46.43
20	took - tuck	25	89.29

Table II a- (to be (continued))

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
21	taught - thought	13	46.43
22	lacy - lazy	8	28.57
23	move - moved	4	14.29
24	catch - cash	3	10.71
25	prayed - played	5	17.86
26	laid - led	20	71.43
27	goal - gold	5	17.86
28	cats - cat	7	25.00
29	Luke - look	15	53.57
30	glue - grew	2	7.14
31	back - bag	6	21.43
32	debt - jet	20	71.43
33	face - faith	3	10.71
34	think - sink	11	39.29
35	pose - suppose	15	53.57
36	Day - they	3	10.71
37	kiss - kit	13	46.43
38	call - crawl	14	50.00
39	plow - plowed	15	53.57
40	sinner - singer	8	28.57

Table 12 b (to be continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
41	bat - badge	14	50.00
42	men - men	9	32.14
43	calf - cap	3	10.71
44	spoons - spoon	4	14.29
45	pine - pint	10	35.71
46	batch - badge	14	50.00
47	mat - match	15	53.57
48	ladder - lather	8	28.57
49	butter - bitter	23	82.14
50	badge - bag	17	60.71
51	sook - sew	16	57.14
52	sheep - ship	8	28.57
53	route - lute	13	46.43
54	lab - lap	16	57.14
55	West - vest	9	32.14
56	Sports - supports	12	42.86
57	knew - know	8	28.57
58	bin - bill	10	35.71
59	led - let	3	10.71
60	pie - pipe	23	82.14



Table 11 c (cont'd)(continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
61	bum - bomb	10	35.71
62	aid - age	7	25.00
63	peace - peas	20	71.43
64	coat - goat	16	57.14
65	tent - tenth	4	14.29
66	fat - fast	13	46.43
67	hid - head	16	57.14
68	chip - ship	5	17.86
69	vase - face	13	46.43
70	bucks - books	23	82.14
71	thin - tin	17	60.71
72	raises - raises	4	14.29
73	loved - love	11	39.29
74	latch - lash	2	7.14
75	clue - crew	11	39.29
76	pepper - paper	7	25.00
77	coal - cold	7	25.00
78	cut - cuts	2	7.14
79	stewed - stood	20	71.43
80	flight - fright	9	32.14

Table 11 c

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
81	league - leak	7	25.00
82	Jean - Dean	21	75.00
83	pass - path	3	10.71
84	thank - sank	12	42.86
85	sports - supports	19	67.86
86	Dare - their	9	32.14
87	bass - bat	22	78.57
88	crop - cop	21	75.00
89	cow - cows	10	35.71
90	ton - tongue	7	25.00
91	lodge - lot	10	35.71
92	pet - pat	14	50.00
93	cuff - cup	5	17.86
94	comb - combs	14	50.00
95	can - can't	3	10.71
96	age - H	4	14.29
97	cooch - coot	13	46.43
98	fodder - father	14	50.00
99	'cm - 'im	8	28.57
100	leg - ledge	5	17.86

Table 12 The Correct answers of each item and percentages of the Central students (N = 244)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
1	toe - toad	23	9.43
2	meat - mitt	25	10.25
3	long - wrong	39	15.98
4	cap - cab	130	53.28
5	vine - wine	46	18.85
6	nose - snows	197	80.74
7	soap - soup	197	80.74
8	spoon - spool	44	18.03
9	bit - bid	24	9.84
10	I - I'll	56	22.95
11	robber - rubber	98	40.16
12	sledge - sled	68	27.87
13	Zine - sink	34	13.94
14	gap - cap	157	64.35
15	mitt - myth	28	11.48
16	eat - east	45	18.44
17	bigger - beggar	142	58.20
18	Chain - Shane	44	18.03
19	V - fee	129	52.87
20	took - tuck	212	86.89

Table 12 a (to be continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
21	taught - thought	115	47.13
22	lacy - lazy	53	21.72
23	move - moved	33	13.52
24	catch - cash	31	12.70
25	prayed - played	28	11.48
26	laid - led	169	69.26
27	gool - gold	65	26.64
28	cats - cat	52	21.31
29	Luke - look	106	43.44
30	glue - grew	11	4.51
31	back - bag	52	21.31
32	debt - jet	141	58.20
33	face - faith	36	14.75
34	think - sink	87	35.66
35	pose - suppose	162	66.39
36	Day - they	24	9.84
37	kiss - kit	137	56.15
38	call - crawl	133	54.51
39	plow - plowed	85	34.84
40	sinner - singer	58	23.77

Table 12 (continued)

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
41	bat - badge	166	68.03
42	men - man	82	33.61
43	calf - cap	21	8.61
44	spoons - spoon	65	26.64
45	pine - pint	108	44.26
46	batch - bodge	108	44.26
47	mat - match	117	47.95
48	ladder - lather	54	22.13
49	butter - bitter	199	81.56
50	badge - bag	97	39.75
51	soak - sew	148	60.66
52	sheep - ship	84	34.43
53	route - lute	82	33.61
54	lab - lap	135	55.33
55	West - vest	67	27.46
56	sports - supports	92	37.70
57	knew - know	155	63.52
58	bin - bill	77	31.56
59	led - let	37	15.16
60	pipe - pipe	198	81.15

Table 12 & (to be (continued))

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
61	bum - bomb	91	37.30
62	aid - age	75	30.74
63	peace - peas	129	52.87
64	coat - goat	160	65.57
65	tent - tenth	34	13.93
66	fat - fast	112	45.90
67	hid - head	196	80.33
68	chip - ship	41	16.80
69	vase - face	71	29.10
70	bucks - books	196	80.33
71	thin - tin	190	77.87
72	races - raises	60	24.59
73	loved - love	76	31.15
74	latch - lash	33	13.52
75	clue - crew	105	43.03
76	pepper - paper	57	23.36
77	cool - cold	57	23.36
78	cut - cuts	55	22.54
79	stewed - stood	179	73.36
80	flight - fright	118	48.36

Table 12 d

No.	Contrasting sounds	Number of correct answer for each item	Percentages %
81	league - leak	76	31.15
82	Jean - Dean	178	72.95
83	pass - path	37	15.16
84	thank - sank	52	21.31
85	sports - supports	150	61.48
86	Dare - their	76	31.15
87	bass - bat	137	56.15
88	crop - cop	150	61.48
89	cow - cows	96	39.34
90	ton - tongue	48	19.67
91	lodge - lot	78	31.97
92	pet - pat	185	75.82
93	cuff - cup	22	9.02
94	comb - combs	120	49.18
95	can - cant	25	10.25
96	age - H	43	17.62
97	coach - coat	91	37.30
98	fodder - father	111	45.49
99	'em - 'im	84	34.43
100	leg - ledge	34	13.93

Every figure in bracket for the following tables is the average percentage for each group, the figures in brackets come from the table of two correct items divided by two.

Table 13 Absolute percentages of Stops for four regions.

No.	Stops	phonemic contrast	C %	N %	NE %	S %
4-54	Bilabial Stops	/-p/-/b/	53-55(54)	55-45(50)	60-70(65)	68-57(63)
9-59	Alveolar Stops	/-t/-/d/	10-15(13)	14-23(19)	20-3 (12)	11-11(11)
14-64	Velar Stops	/g/-/k-/	64-66(65)	64-55(60)	60-57(59)	61-57(59)
31-81	Velar Stops	/-k/-/g/	21-31(26)	5-18(12)	13-40(27)	21-25(23)

Table 14 Absolute percentages of Affricates for four regions.

No.	Affricates	phonemic contrast	C %	N %	NE %	S %
46-96	Alveopalatal Affricates	/-tʃ/-/dʒ/	44-18(31)	36-9(23)	53-13(33)	50-14(32)

Table 15 Absolute percentages of Fricatives for four regions.

No.	Fricatives	phonemic contrast	C %	N %	NE %	S %
19-69	Labiodental Fricatives	/f/-/v-/	53-29(41)	55-27(41)	47-26(37)	46-46(46)
13	Alveolar Fricatives	/s/-/z/(14)	(14)	(9)	(17)	(7)



Table 15. (continued)

No.	Fricatives	phonemic contrast	C %	N %	NE %	S %
22-72	Alveolar					
	Fricatives	/-s/-/-z-/	22-25 (24)	27-23 (25)	47-37 (42)	29-14 (22)
63	Alveolar					
	Fricatives	/-s/-/-z-/	(53)	(68)	(57)	(71)

Table 16 Absolute percentages of clusters for four groups

No.	phonemic contrast	C %	N %	NE %	S %
25	/pr/-/pl-/	(11)	(18)	17	(18)
6	/Sn/-/Sn/	(81)	(68)	(63)	(79)
30	/gl/-/gr-/	(5)	(9)	(7)	(7)
56	/sp/-/sp-/	(31)	(18)	(40)	(25)
38-88	/kr/-/kr-/	55-61 (58)	41-45 (43)	43-77 (60)	50-75 (63)
35-85	/sp/-/sp-/	66-61 (64)	36-50 (43)	30-63 (47)	54-68 (61)
75	/kl/-/kr-/	(43)	(50)	(40)	(39)
80	/p/-/fl-/	(48)	(36)	(60)	(32)

Table 17 Absolute percentages of final clusters for four groups.

No.	phonemic contrast	C %	N %	NE %	S %
16-66	/-t/-/st-/	18-46 (32)	5-55 (30)	10-63 (37)	7-46 (27)
23-73	/-v/-/va/	14-31 (23)	23-18 (21)	7-17 (12)	14-39 (27)

Table 17 (continued)

No.	phonemic contrast	C %	N %	NE %	S %
27-77	/-l/-/-ld/	27-33(25)	14-32(23)	33-17(25)	18-25(22)
28-78	/-t/-/-ts/	21-23(22)	9-32(21)	20-20(20)	25-7(16)
44	/-n/-/-nz/	(27)	(18)	(40)	(14)
45-95	/-n/-/-nt/	44-10(27)	55-9(32)	43-10(27)	36-11(24)
94	/-m/-/-mz/	(49)	(55)	(37)	(50)

Table 18 Vowels with final consonants.

No.	phonemic contrast	C %	N %	NE %	S %
1	/ou/-/oud/	(9)	(5)	(13)	(0)
51	/ou/-/ouk/	(61)	(50)	(43)	(57)
10	/ai/-/ail/	(23)	(23)	(20)	(46)
60	/ai/-/aip/	(81)	(82)	(93)	(82)
39	/au/-/aud/	(35)	(36)	(23)	(54)
89	/au/-/auz/	(39)	(55)	(57)	(36)

Table 19 Absolute percentages of vowel contrasts heard correctly by the four groups.

No.	phonemic contrast	C %	N %	NE %	S %
2-52	/I/-/I/	10-34(22)	14-36(25)	10-33(22)	11-29(20)
7-57	/ou/-/u/	81-64(73)	95-73(84)	90-57(74)	82-29(56)

Table 19 (continued)

No.	phonemic contrast	C %	N %	NE %	S %
11-61	/ɔ̃/-/ə/	40-37(39)	23-45(34)	23-37(30)	36-36(36)
17-67	/ɪ/-/ɛ/	58-80(69)	41-64(53)	43-70(57)	61-57(59)
20-70	/ə/-/U/	87-80(84)	77-68(73)	83-93(88)	89-82(86)
26-76	/ei/-/ɛ/	69-23(46)	64-14(39)	80-30(55)	71-25(48)
29-79	/u:/-/U/	43-73(58)	45-64(55)	47-57(52)	54-71(63)
42-92	/x/-/ɛ/	34-76(55)	45-73(59)	27-70(49)	32-50(41)
49-99	/ɪ/-/ə/	82-34(58)	95-50(73)	97-33(65)	82-29(56)

Table 20 Absolute percentages of miscellaneous consonants only for four groups.

No.	phonemic contrast	C %	N %	NE %	S %	
3-53	Alveolar Semivowel & Alveolar Lateral	/r/-/l-/	16-34(25)	23-18(21)	10-33(22)	29-46(38)
5-55	Labiodental Fricative & Bilabial Semivowel	/v/-/w-/	19-27(23)	18-23(21)	17-20(19)	7-32(20)
8-58	Alveolar Nasal & Alveolar lateral	/n/-/l-/	18-32(25)	23-23(23)	13-30(22)	11-36(24)
12-62	Alveolar Stop & Alveopalatal Affricate	/d/-/tʃ-/	28-31(30)	27-27(27)	37-33(35)	29-25(27)
32-82	" " "	/d/-/tʃ-/	58-73(66)	55-68(62)	33-77(55)	71-75(73)
41-91	" " "	/t/-/tʃ-/	68-32(50)	55-23(39)	67-17(42)	50-36(43)
47-97	" " "	/t/-/tʃ-/	48-37(43)	50-59(55)	47-43(45)	54-46(50)

Table 20 (continued)

No.		phonemic contrast	C %	N %	NE %	S %
15-65	Alveolar Stop & Dental Fricative	/-t/-/-θ/	11-14 (13)	18-9 (14)	7-10 (9)	14-14 (14)
21-71	" "	/t/-/-θ-/	47-78 (63)	45-82 (64)	40-67 (54)	46-61 (54)
36-86	" "	/d/-/-ð-/	10-31 (21)	18-36 (27)	17-27 (22)	11-32 (22)
48-98	" "	/-d/-/-ð/	22-45 (34)	27-45 (36)	33-50 (42)	29-50 (40)
18-68	Alveopalatal Aff- ricate & Alveopal- atal Fricative	/t̪/-/-t̪-/	18-17 (18)	9-18 (14)	10-7 (9)	21-17 (19)
24-74	" "	/-t̪/-/-t̪-/	13-14 (14)	23-9 (16)	17-27 (17)	11-7 (9)
33-83	Dental Fricative & Alveolar Frica- tive	/-θ/-/-s/	15-15 (15)	36-18 (27)	13-17 (15)	11-11 (11)
34-84	" "	/θ/-/-s-/	36-21 (29)	41-36 (39)	40-33 (37)	39-43 (41)
37-87	Alveolar Fricative & Alveolar Stop	/-s/-/-t/	56-56 (56)	55-50 (53)	50-63 (57)	46-79 (63)
40	Velar Nasal & Al- veolar Nasal	/-ŋ/-/-n-/	(24)	(27)	(13)	(29)
90	" "	/-ŋ/-/-n/	(20)	(27)	(10)	(25)
43-93	Labiodental Fri- cative & Bilabial Stop	/-f/-/-p/	9-9 (9)	5-5 (5)	13-7 (10)	11-18 (15)
50-100	Alveopalatal Aff- ricate & Velar Stop	/-t̪/-/-t̪-/	40-14 (27)	55-5 (30)	47-13 (30)	61-18 (40)