

Appendix 9

Level of Difficulty and Discrimination Power of Try Out Test

Item Number	Correct High	Correct Low	U+L	U-L	LD	DP	Suggestion
1	20	14	34	6	0.85	0.30	Omitted
2	20	10	30	10	0.75	0.50	Administered
3	17	10	27	7	0.68	0.35	Administered
4	18	10	28	8	0.70	0.40	Administered
5	17	12	29	5	0.73	0.25	Administered
6	16	6	22	10	0.55	0.50	Administered
7	19	14	33	5	0.83	0.25	Omitted
8	8	3	11	5	0.28	0.25	Omitted
9	16	9	25	7	0.63	0.35	Administered
10	13	5	18	8	0.45	0.40	Administered
11	14	7	21	7	0.53	0.35	Administered
12	16	11	27	5	0.68	0.25	Administered
13	17	10	27	7	0.68	0.35	Administered
14	17	11	28	6	0.70	0.30	Administered
15	17	10	27	7	0.68	0.35	Administered
16	18	12	30	6	0.75	0.30	Administered
17	7	8	15	-1	0.38	-	Omitted
18	11	9	20	2	0.50	0.10	Omitted
19	13	11	24	2	0.60	0.10	Omitted
20	15	10	25	5	0.63	0.25	Administered
21	15	9	24	6	0.60	0.30	Administered
22	13	3	16	10	0.40	0.50	Administered
23	18	10	28	8	0.70	0.40	Administered
24	11	7	18	4	0.45	0.20	Administered
25	17	11	28	6	0.70	0.30	Administered
26	12	7	19	5	0.48	0.25	Administered
27	17	12	29	5	0.73	0.25	Administered
28	17	11	28	6	0.70	0.30	Administered
29	20	16	36	4	0.90	0.20	Omitted
30	19	11	30	8	0.75	0.40	Administered
31	14	9	23	5	0.58	0.25	Administered
32	18	7	25	11	0.63	0.55	Administered
33	17	12	29	5	0.73	0.25	Administered
34	10	9	19	1	0.48	0.05	Administered
35	19	9	28	10	0.70	0.50	Administered
36	20	14	34	6	0.85	0.30	Omitted
37	10	9	19	1	0.48	0.05	Omitted
38	19	16	35	3	0.88	0.15	Omitted
39	12	5	17	7	0.43	0.35	Administered
40	13	7	20	6	0.50	0.30	Administered

Appendix 10

The Reliability of try out test

No	Students' Code	Odd (X)	Even (Y)	Total	(X) ²	(Y) ²	XY
1	A	19	17	36	361	289	323
2	B	16	17	33	256	289	272
3	C	17	18	35	289	324	306
4	D	17	16	33	289	256	272
5	E	17	16	33	289	256	272
6	F	17	15	32	289	225	255
7	G	16	17	33	256	289	272
8	H	16	15	31	256	225	240
9	I	19	16	35	361	256	304
10	J	16	15	31	256	225	240
11	K	18	14	32	324	196	252
12	L	15	16	31	225	256	240
13	M	19	12	31	361	144	228
14	N	15	15	30	225	225	225
15	O	14	15	29	196	225	210
16	P	13	16	29	169	256	208
17	Q	14	14	28	196	196	196
18	R	15	14	29	225	196	210
19	S	18	15	33	324	225	270
20	T	15	12	27	225	144	180
21	U	16	12	28	256	144	192
22	V	14	12	26	196	144	168
23	W	11	14	25	121	196	154
24	X	16	10	26	256	100	160
25	Y	14	10	24	196	100	140
26	Z	11	14	25	121	196	154
27	AA	14	12	26	196	144	168
28	AB	10	9	19	100	81	90
29	AC	11	10	21	121	100	110
30	AD	10	7	17	100	49	70
31	AF	10	9	19	100	81	90
32	AG	8	10	18	64	100	80
33	AH	14	2	16	196	4	28
34	AI	8	11	19	64	121	88
35	AJ	8	7	15	64	49	56

36	AK	7	8	15	49	64	56
37	AL	9	5	14	81	25	45
38	AM	9	4	13	81	16	36
39	AN	6	5	11	36	25	30
40	AO	7	4	11	49	16	28
	Total	539	480	1019	7819	6452	6918

The Calculation of Reliability of Try Out Test Items

$$\begin{aligned}
 r_{xy} &= \frac{\sum xy}{(\sum x^2)(\sum y^2)} \\
 &= \frac{6918}{\sqrt{(7819)(6452)}} \\
 &= \frac{6918}{\sqrt{50448188}} \\
 &= \frac{6918}{7102,688} \\
 &= 0.97
 \end{aligned}$$

$$\begin{aligned}
 r_k &= \frac{2r_l}{1+r_l} \\
 &= \frac{2(0.97)}{1+(0.97)} \\
 &= \frac{1.97}{1.97} \\
 &= 0.98
 \end{aligned}$$

Appendix 11

The Results of Pretest and Posttest in Experimental class and Control class

NO	Experimental Class		Control Class	
	Pretest	Posttest	Pretest	Posttest
1	50	90	66	70
2	53	86	68	72
3	40	78	70	75
4	36	80	66	72
5	62	75	46	84
6	44	50	42	48
7	66	72	34	54
8	44	48	70	82
9	50	65	52	80
10	66	70	52	54
11	54	64	54	82
12	66	84	58	80
13	52	60	58	80
14	66	88	36	42
15	70	90	58	60
16	54	86	74	90
17	64	86	60	82
18	38	40	48	74
19	54	64	40	48
20	76	84	36	42
21	78	88	82	86
22	72	74	52	52
23	48	66	76	78
24	70	76	64	66
25	36	88	62	80
26	50	58	38	42
27	70	72	64	78
28	60	72	54	56
29	58	60	46	76
30	38	50	48	59
	1685	2164	1674	2044