

APPENDIX - IX

Calculation of test-retest Reliability and
 Criterion Validity of Academic Life Questionnaire

I. Test-retest Reliability

Sr. No.	X	Y	X_1	Y_1	X_1^2	Y_1^2	X_1Y_1
1	42	43	2	3	4	9	6
2	46	44	6	4	36	16	24
3	39	41	-1	1	1	1	-1
4	30	33	-10	-7	100	49	70
5	33	31	-7	-9	49	81	63
6	41	40	1	0	1	0	0
7	40	41	0	1	0	1	0
8	40	40	0	0	0	0	0
9	36	38	-4	-2	16	4	3
10	47	46	7	6	49	36	42
11	33	35	-7	-5	49	25	35
12	46	46	6	6	36	36	36
13	40	42	0	2	0	4	0
14	38	36	-2	-4	4	16	8
15	34	39	-6	-1	36	1	6
16	38	38	-2	-2	4	4	4
17	40	42	0	2	0	4	0
18	44	46	4	6	16	36	24
19	46	47	6	7	36	49	42
20	38	35	-2	-5	4	25	10
21	35	38	-5	-2	25	4	10
22	45	44	5	4	25	16	20
23	29	36	-11	-4	121	16	44
24	33	34	-7	-6	49	36	42
25	34	39	-6	-1	36	1	6
	<u>960</u>	<u>994</u>	<u>-27</u>	<u>-6</u>	<u>697</u>	<u>470</u>	<u>499</u>

Note : X is First Test's Scores on Academic Life.

Y is Retest Scores on Academic Life.

II. Estimation of Criterion Validity

Sr. No.	X	Y	X ₁	Y ₁	X ₁ ²	Y ₁ ²	X ₁ Y ₁
1	62	40	7	0	49	0	0
2	63	42	8	2	64	4	16
3	41	29	-15	-11	225	121	165
4	59	39	4	-1	16	1	-4
5	62	45	7	5	49	25	35
6	73	47	18	7	324	49	126
7	61	42	6	2	36	4	12
8	64	45	9	5	81	25	45
9	64	48	9	8	81	64	72
10	59	38	4	-2	16	4	-8
11	60	44	5	4	25	16	20
12	42	20	-13	-20	169	400	260
13	46	27	-9	-13	81	169	117
14	48	25	-7	-15	49	225	105
15	34	20	-21	-20	441	400	420
16	57	38	2	-2	4	4	-4
17	60	39	5	-1	25	1	-5
18	55	45	0	5	0	25	0
19	47	34	-8	-6	64	36	48
20	60	48	5	8	25	64	40
21	60	37	5	-3	25	9	-15
22	62	40	7	0	49	0	0
23	54	33	-1	-7	1	49	7
24	53	32	-2	-8	4	64	16
25	70	46	15	6	225	36	90
26	42	28	-13	-12	169	144	156
27	56	36	1	-4	1	16	-4
28	68	40	13	0	169	0	0
29	47	24	-8	-16	64	256	128
30	57	37	2	-3	4	9	-6
	<u>1686</u>	<u>1106</u>	<u>35</u>	<u>-92</u>	<u>2539</u>	<u>2220</u>	<u>1832</u>

Note : X is Academic Performance Scores.

Y is Academic Life Scores.

The test-retest reliability and criterion validity were estimated by calculating the coefficient of correlations as follows from the scores mentioned above.

Formula :

$$r = \frac{N \Sigma XY - \Sigma X \times \Sigma Y}{\sqrt{[N \Sigma X^2 - (\Sigma X)^2] [N \Sigma Y^2 - (\Sigma Y)^2]}}$$

Reliability:

$$r = \frac{25 \times 499 - (-27 \times -6)}{\sqrt{[25 \times 697 - (-27)^2] [25 \times 470 - (-6)^2]}}$$

Validity :

$$r = \frac{30 \times 1832 - (35 \times -92)}{\sqrt{[30 \times 2529 - (35)^2] [30 \times 2220 - (92)^2]}}$$

$$= .886$$
