

CHAPTER 5: PRINCIPAL COMPONENTS ANALYSIS

Analysis of subject scores data

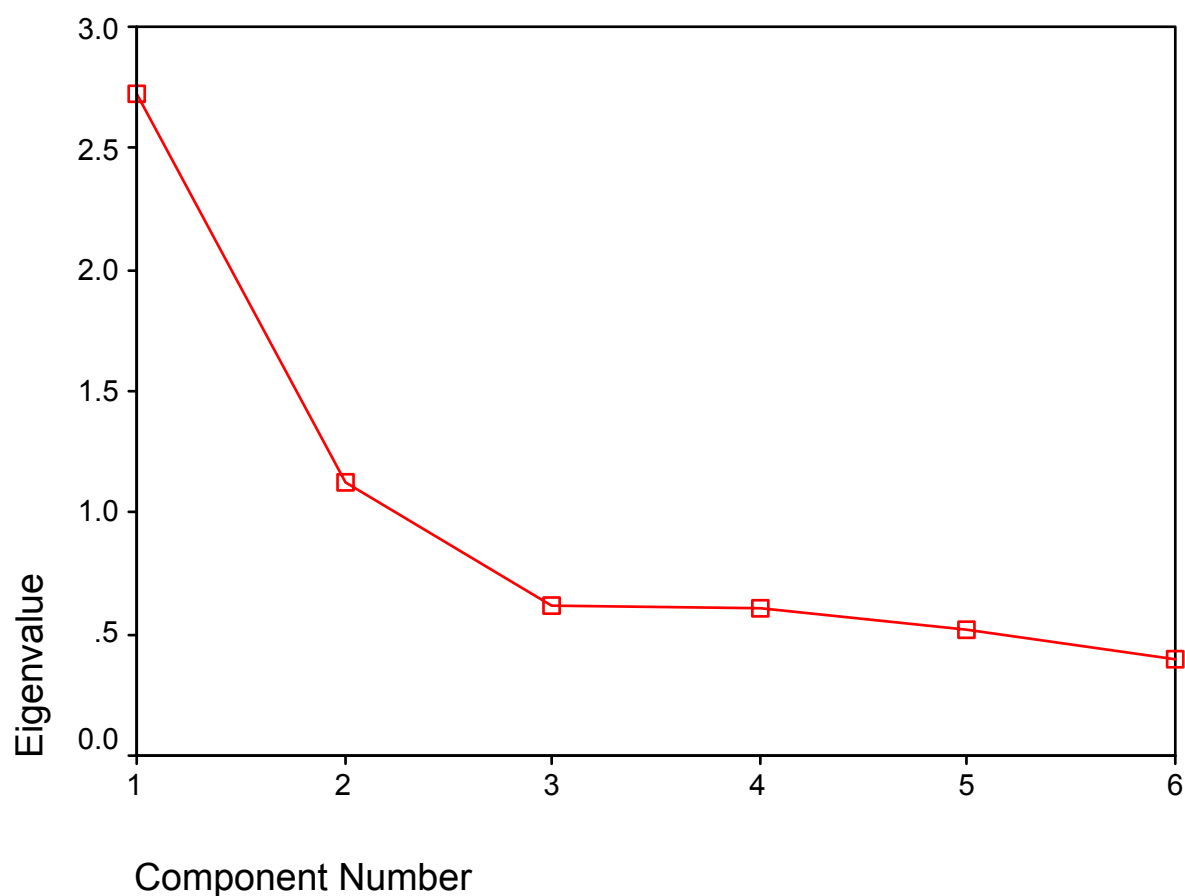
6 Components

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.729	45.478	45.478	2.729	45.478	45.478
2	1.129	18.813	64.291	1.129	18.813	64.291
3	.615	10.255	74.546	.615	10.255	74.546
4	.603	10.047	84.593	.603	10.047	84.593
5	.523	8.709	93.302	.523	8.709	93.302
6	.402	6.698	100.000	.402	6.698	100.000

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component					
	1	2	3	4	5	6
Gaelic	.661	.444	-.163	-.354	-.455	8.772E-02
English	.688	.290	-.531	.270	.277	-.101
History	.516	.640	.519	.113	.204	1.921E-02
Arith	.736	-.417	1.783E-02	-.181	.243	.439
Algebra	.742	-.373	.133	-.306	9.395E-02	-.437
Geo	.678	-.354	.138	.516	-.360	4.393E-03

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Component Score Coefficient Matrix

	Component					
	1	2	3	4	5	6
Gaelic	.242	.394	-.264	-.587	-.870	.218
English	.252	.257	-.864	.447	.530	-.253
History	.189	.567	.844	.187	.391	.048
Arith	.270	-.369	.029	-.301	.465	1.092
Algebra	.272	-.330	.216	-.507	.180	-1.087
Geo	.249	-.314	.224	.856	-.689	.011

Extraction Method: Principal Component Analysis.

Component Score Covariance Matrix

Component	1	2	3	4	5	6
1	1.000	.000	.000	.000	.000	.000
2	.000	1.000	.000	.000	.000	.000
3	.000	.000	1.000	.000	.000	.000
4	.000	.000	.000	1.000	.000	.000
5	.000	.000	.000	.000	1.000	.000
6	.000	.000	.000	.000	.000	1.000

Extraction Method: Principal Component Analysis.

2 Components

Communalities

	Initial	Extraction
Gaelic	1.000	.634
English	1.000	.558
History	1.000	.676
Arith	1.000	.715
Algebra	1.000	.689
Geo	1.000	.585

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.729	45.478	45.478	2.729	45.478	45.478
2	1.129	18.813	64.291	1.129	18.813	64.291
3	.615	10.255	74.546			
4	.603	10.047	84.593			
5	.523	8.709	93.302			
6	.402	6.698	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component	
	1	2
Gaelic	.661	.444
English	.688	.290
History	.516	.640
Arith	.736	-.417
Algebra	.742	-.373
Geo	.678	-.354

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Component Plot

