

## Appendix 2 Proportion of Variance at the School Level

Within the framework of the variance components models reported in this volume, one way of assessing the extent of school differences is to consider the proportion of the total (unexplained) variance that is attributable to the school level. In the case of models having only the grand mean in the random part (in which, therefore, the slopes do not vary between schools) a single statistic can be quoted, which gives the proportion of the variance attributable to the school level. In the case of models having one or more of the independent variables in the random part (in which some of the slopes therefore vary between schools) a single statistic cannot be quoted. In such models, the proportion of the variance attributable to the school level depends on the characteristics of the pupil (on the values taken by the variables included in the random part).

The tables below show the proportion of the variance attributable to the school level for the more important models having one or more independent variables in the random part. (For the simpler models having only the grand mean in the random part, the single figure has been quoted in the text.)

**Table A1 Proportion of variance of the school level: outcome – second-year reading score**  
*Percentages*

Socio-economic group	Country of origin		
	UK	South Asian	Other
Neither parent has worked	14.1	10.0	14.6
Unskilled manual	10.0	6.0	11.1
Semi-skilled manual	8.9	4.2	9.5
Skilled manual	9.4	4.8	10.0
White collar	12.3	7.6	12.9
Professional or managerial	16.9	13.0	17.4

**Table A2 Proportion of variance at the school level: outcome – second-year maths score**

*Percentages*

First-year maths score	
5	9.0
10	7.0
15	6.4
20	7.3
25	9.6

**Table A3 Proportion of variance at the school level: outcome – total exam score**

*Percentages*

Second-year reading score	Country of origin		
	UK	South Asian	Other
40	8.5	12.3	8.4
45	6.6	10.5	6.5
50	4.9	8.9	4.8
55	3.5	7.7	3.4
60	2.5	6.8	2.4
65	1.8	6.2	1.7
70	1.5	5.9	1.4
75	1.6	5.9	1.5
80	2.0	6.4	1.9
85	2.9	7.1	2.7
90	4.0	8.2	3.9
95	5.5	9.6	5.4
100	7.3	11.2	7.2
105	9.4	13.1	9.3
110	11.7	15.2	11.6

**Table A4 Proportion of variance at the school level: outcome – English exam score***Percentages*

Second-year score	Country of origin		
	UK	South Asian	Other
40	9.9	17.8	15.8
45	7.3	15.4	13.5
50	5.6	13.9	12.0
55	4.1	12.6	10.7
60	3.0	11.6	9.8
65	2.2	10.9	9.0
70	1.7	10.5	8.6
75	1.6	10.3	8.5
80	1.5	10.5	8.6
85	2.4	11.0	9.2
90	3.2	11.8	10.0
95	4.5	12.9	11.0
100	5.6	14.2	12.3
105	7.7	15.8	13.8
110	9.7	17.6	15.6

**Table A5 Proportion of variance at the school level: outcome – maths exam score***Percentages*

Second-year maths score	
10	18.1
15	11.8
20	6.8
25	3.6
30	2.6
35	3.9
40	7.5
45	12.7
50	19.1