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Evaluation of the National Literacy and Numeracy Programmes Technical Annex

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Evaluation of the National Literacy and Numeracy Programmes

Final Report – Technical Annex

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Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

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Contents

Responses to the survey of school leaders in 2014 and 2015.....2
Analysis of pupil-level data from the School Census 2011 to 2015.....56

Responses to the survey of school leaders in 2014 and 2015

Background Information

Table 0-1: Role of respondent

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
Headteacher/Principal	215	248	61	58
Senior Leader	72	77	20	18
Head of Department/Faculty	3	11	1	3
Literacy Coordinator	10	21	3	5
Numeracy Coordinator	14	22	4	5
Classroom Teacher	4	4	1	1
Other	17	8	5	2
Missing	17	40	5	9
Total	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-2: Local Authority in which the school is situated

		Frequency		Percent	
		2014	**2015**	**2014**	**2015**
Central SW	Cardiff Council	25	19	7	4
	Rhondda Cynon Taf County Borough Council	21	42	6	10
	Bridgend County Borough Council	16	24	5	6
	Vale of Glamorgan Council	5	11	1	3
	Merthyr Tydfil County Borough Council	8	6	2	1
North Wales	Conwy County Borough Council	20	21	6	5

		Frequency		Percent	
		2014	2015	2014	2015
	Wrexham County Borough Council	23	29	7	7
	Flintshire County Council	14	15	4	3
	Denbighshire County Council	14	19	4	4
	Isle of Anglesey County Council	10	17	3	4
	Gwynedd Council	22	3	6	1
South East Wales	Caerphilly County Borough Council	29	28	8	6
	Newport City Council	13	9	4	2
	Blaenau Gwent County Borough Council	6	6	2	1
	Monmouthshire County Council	10	3	3	1
South West and Mid Wales	Neath Port Talbot County Borough Council	25	24	7	6
	Pembrokeshire County Council	10	17	3	4
	City and County of Swansea	6	9	2	2
	Carmarthenshire County Council	32	47	9	11
	Powys County Council	14	19	4	4
	Ceredigion County Council	9	19	3	4
Missing		20	44	6	10
Total		352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-3: Type of school

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
Primary	221	257	63	60
Middle	1	1	0	0
Secondary	92	105	26	24
Pupil Referral Unit	2	2	1	0
Special	9	6	3	1
Other	6	12	2	3
Missing	21	48	6	11
Total	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-4: Language medium of school

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
Bilingual	29	29	8	7
Dual stream	6	8	2	2
English medium	207	244	59	57
English with significant Welsh	13	13	4	3
Transitional	1	1	0	0
Welsh medium	72	87	20	20
Missing	24	49	7	11
Total	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

The National Literacy and Numeracy Framework

Table 0-5: Perceived impact of the National Literacy and Numeracy framework on the profile of literacy and numeracy

	It has raised the profile				It has had no impact on the profile				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Welsh/English specialists	143	298	41	69	52	47	15	11	18	12	5	3	139	74	39	17	352	431	100	100
Maths specialists	145	300	41	70	50	45	14	10	18	10	5	2	139	76	39	18	352	431	100	100
Staff across the school	173	341	49	79	35	17	10	4	8	8	2	2	136	65	39	15	352	431	100	100
Pupils	134	288	38	67	57	45	16	10	20	29	6	7	141	69	40	16	352	431	100	100
Parents	103	200	29	46	73	75	21	17	37	85	11	20	139	71	39	16	352	431	100	100
School governors	145	291	41	68	42	34	12	8	26	34	7	8	139	72	39	17	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-6: Perceived impact of the National Literacy and Numeracy framework on the profile of literacy and numeracy in primary schools

	It has raised the profile				It has had no impact on the profile				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Welsh/English specialists	100	197	45	77	43	32	19	12	16	7	7	3	62	21	28	8	221	257	100	100
Maths specialists	101	199	46	77	42	32	19	12	17	5	8	2	61	21	28	8	221	257	100	100
Staff across the school	119	225	54	88	33	16	15	6	8	5	4	2	61	11	28	4	221	257	100	100
Pupils	95	188	43	73	47	35	21	14	17	20	8	8	62	14	28	5	221	257	100	100
Parents	70	124	32	48	60	62	27	24	30	54	14	21	61	17	28	7	221	257	100	100
School governors	106	195	48	76	35	24	16	9	19	22	9	9	61	16	28	6	221	257	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-7: Perceived impact of the National Literacy and Numeracy framework on the profile of literacy and numeracy in secondary schools

	It has raised the profile				It has had no impact on the profile				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Welsh/English specialists	35	87	38	83	7	9	8	9	1	5	1	5	49	4	53	4	92	105	100	100
Maths specialists	36	86	39	82	6	9	7	9	0	4	0	4	50	6	54	6	92	105	100	100
Staff across the school	44	97	48	92	0	0	0	0	0	2	0	2	48	6	52	6	92	105	100	100
Pupils	34	85	37	81	5	6	5	6	2	8	2	8	51	6	55	6	92	105	100	100
Parents	27	66	29	63	8	9	9	9	6	24	7	23	51	6	55	6	92	105	100	100
School governors	30	79	33	75	4	8	4	8	7	10	8	10	51	8	55	8	92	105	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-8: Extent to which the National Literacy and Numeracy Framework has become embedded within the assessment cycle and curriculum planning within the school

		Fully embedded				Partially embedded				Not embedded at all				Don't know / Not sure				Missing				Total			
		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
		14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Assessment Cycle	In English / Welsh	20	172	6	40	66	180	19	42	2	5	1	1	1	4	0	1	263	70	75	16	352	431	100	100
	In maths	21	172	6	40	63	178	18	41	3	3	1	1	1	5	0	1	264	73	75	17	352	431	100	100
	Across the curriculum	10	103	3	24	73	248	21	58	4	7	1	2	2	2	1	0	263	71	75	16	352	431	100	100
Curriculum Planning	In English / Welsh	75	204	21	47	112	122	32	28	3	0	1	0	3	2	1	0	159	103	45	24	352	431	100	100

	Fully embedded				Partially embedded				Not embedded at all				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
In maths	76	196	22	45	112	127	32	29	3	0	1	0	2	4	1	1	159	104	45	24	352	431	100	100
Across the curriculum	52	128	15	30	138	200	39	46	1	2	0	0	2	1	1	0	159	100	45	23	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-9: Extent to which the National Literacy and Numeracy Framework has become embedded within the assessment cycle and curriculum planning within primary schools

		Fully embedded				Partially embedded				Not embedded at all				Don't know / Not sure				Missing				Total			
		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
		14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Assessment Cycle	In English / Welsh	14	122	6	47	43	122	19	47	1	3	0	1	1	0	0	0	162	10	73	4	221	257	100	100
	In maths	15	118	7	46	41	122	19	47	1	3	0	1	1	0	0	0	163	14	74	5	221	257	100	100
	Across the curriculum	9	57	4	22	45	161	20	63	2	3	1	1	2	23	1	9	163	13	74	5	221	257	100	100
Curriculum Planning	In English / Welsh	54	141	24	55	89	80	40	31	2	0	1	0	2	0	1	0	74	36	33	14	221	257	100	100

	Fully embedded				Partially embedded				Not embedded at all				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
In maths	53	133	24	52	90	88	41	34	2	0	1	0	2	0	1	0	74	36	33	14	221	257	100	100
Across the curriculum	44	99	20	39	99	121	45	47	1	1	0	0	2	0	1	0	75	36	34	14	221	257	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-10: Extent to which the National Literacy and Numeracy Framework has become embedded within the assessment cycle and curriculum planning within secondary schools

		Fully embedded				Partially embedded				Not embedded at all				Don't know / Not sure				Missing				Total			
		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
		14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Assessment Cycle	In English / Welsh	4	40	4	38	18	49	20	47	1	2	1	2	0	4	0	4	69	10	75	10	92	105	100	100
	In maths	4	44	4	42	17	48	18	46	2	0	2	0	0	4	0	4	69	9	75	9	92	105	100	100
	Across the curriculum	1	15	1	14	20	73	22	70	2	4	2	4	0	4	0	4	69	9	75	9	92	105	100	100
Curriculum Planning	In English / Welsh	17	48	18	46	18	38	20	36	1	0	1	0	1	2	1	2	55	17	60	16	92	105	100	100
	In maths	19	49	21	47	17	35	18	33	1	0	1	0	0	3	0	3	55	18	60	17	92	105	100	100
	Across the curriculum	4	18	4	17	33	70	36	67	0	1	0	1	0	1	0	1	55	15	60	14	92	105	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-11: Challenges faced to the school in embedding the National Literacy and Numeracy Framework within the assessment cycle in a school

	Not at all challenging				Not very challenging				Quite challenging				Very challenging				Don't know/ Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Compatibility with existing curriculum models	8	32	2	7	19	82	5	19	50	172	14	40	9	42	3	10	5	16	1	4	261	87	74	20	352	431	100	100
Knowledge & experience of teachers	10	39	3	9	26	108	7	25	46	172	13	40	8	26	2	6	1	1	0	0	261	85	74	20	352	431	100	100
Limited support from educational consortia	10	46	3	11	30	88	9	20	30	133	9	31	19	53	5	12	2	20	1	5	261	91	74	21	352	431	100	100
Other	7	5	2	1	9	10	3	2	7	12	2	3	3	19	1	4	65	40	18	9	261	345	74	80	352	431	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-12: Challenges faced to the school in embedding the National Literacy and Numeracy Framework within the curriculum planning system in a school

	Not at all challenging				Not very challenging				Quite challenging				Very challenging				Don't know/ Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Compatibility with existing curriculum models	19	35	5	8	43	92	12	21	105	154	30	36	21	30	6	7	8	9	2	2	156	111	44	26	352	431	100	100
Knowledge & experience of teachers	21	40	6	9	72	104	20	24	86	149	24	35	15	25	4	6	2	4	1	1	156	109	44	25	352	431	100	100
Limited support from educational consortia	14	35	4	8	56	81	16	19	79	128	22	30	37	53	11	12	10	20	3	5	156	114	44	26	352	431	100	100
Other	9	4	3	1	14	8	4	2	18	12	5	3	9	16	3	4	146	46	41	11	156	345	44	80	352	431	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-13: Effectiveness of the National Literacy and Numeracy Framework as a means of assessing the progress of pupils in literacy

	We have found it helpful				We have found it neither helpful or unhelpful				We have not found it helpful				We have not yet used it in this way				Not applicable				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
All pupils	35	182	10	42	27	78	8	18	8	32	2	7	11	28	3	6	1	2	0	0	5	11	1	3	265	98	75	23	352	431	100	100
More able/gifted/ talented pupils	34	162	10	38	25	87	7	20	10	31	3	7	10	28	3	6	3	5	1	1	5	11	1	3	265	107	75	25	352	431	100	100
Underperforming pupils	30	158	9	37	26	90	7	21	12	33	3	8	9	26	3	6	3	3	1	1	6	9	2	2	266	112	76	26	352	431	100	100
Pupils with additional learning needs	24	144	7	33	25	90	7	21	20	51	6	12	11	26	3	6	2	2	1	0	5	9	1	2	265	109	75	25	352	431	100	100
Pupils with Welsh and/or English as an Additional Language	11	66	3	15	23	78	7	18	17	47	5	11	9	31	3	7	12	70	3	16	14	27	4	6	266	112	76	26	352	431	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-14: Effectiveness of the National Literacy and Numeracy Framework as a means of assessing the progress of pupils in numeracy

	We have found it helpful				We have found it neither helpful or unhelpful				We have not found it helpful				We have not yet used it in this way				Not applicable				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
All pupils	34	183	10	42	30	77	9	18	6	31	2	7	13	28	4	6	1	1	0	0	4	7	1	2	264	104	75	24	352	431	100	100
More able/gifted/ talented pupils	35	161	10	37	25	88	7	20	9	32	3	7	11	28	3	6	3	4	1	1	4	9	1	2	265	109	75	25	352	431	100	100
Underperforming pupils	28	154	8	36	29	89	8	21	8	35	2	8	12	29	3	7	3	2	1	0	5	8	1	2	267	114	76	26	352	431	100	100
Pupils with additional learning needs	23	143	7	33	27	96	8	22	18	40	5	9	13	30	4	7	2	1	1	0	6	8	2	2	263	113	75	26	352	431	100	100
Pupils with Welsh and/or English as an Additional Language	11	72	3	17	22	85	6	20	17	35	5	8	14	33	4	8	12	67	3	16	12	24	3	6	264	115	75	27	352	431	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-15: Perceived impact of the National Literacy and Numeracy Framework on the quality of teaching and learning in school

	Very positive impact				Fairly positive impact				Neither a positive nor a negative impact				Fairly negative impact				Very negative impact				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Literacy	35	86	10	20	101	170	29	39	53	55	15	13	2	5	1	1	0	1	0	0	4	4	1	1	157	110	45	26	352	431	100	100
Numeracy	33	73	9	17	98	178	28	41	58	62	16	14	2	5	1	1	0	1	0	0	4	4	1	1	157	108	45	25	352	431	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-16: Perceived impact of the National Literacy and Numeracy Framework on the quality of teaching and learning in primary schools

	Very positive impact				Fairly positive impact				Neither a positive nor a negative impact				Fairly negative impact				Very negative impact				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Literacy	25	56	11	22	76	114	34	44	43	41	19	16	2	3	1	1	0	1	0	0	2	0	1	0	73	42	33	16	221	257	100	100
Numeracy	27	57	12	22	72	114	33	44	45	42	20	16	2	3	1	1	0	1	0	0	2	0	1	0	73	40	33	16	221	257	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-17: Perceived impact of the National Literacy and Numeracy Framework on the quality of teaching and learning in secondary schools

	Very positive impact				Fairly positive impact				Neither a positive nor a negative impact				Fairly negative impact				Very negative impact				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Literacy	7	23	8	22	23	47	25	45	5	11	5	10	0	2	0	2	0	0	0	0	2	4	2	4	55	18	60	17	92	105	100	100
Numeracy	5	11	5	10	22	54	24	51	8	17	9	16	0	2	0	2	0	0	0	0	2	3	2	3	55	18	60	17	92	105	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

The Reading and Numeracy Tests

Table 0-18: The use of other tests for pupils in Years 2 to 9 in addition to the National Reading and Numeracy Tests?

	No, we only use the National Reading / Numeracy Test				Yes we use other standardised reading / numeracy tests with pupils for whom the national curriculum has been disapplied				Yes, we also use other standardised reading / numeracy tests with pupils for whom we want more diagnostic (or other) information about numeracy skills				Yes, we also use other standardised reading / numeracy tests with all pupils				We have not used the National Reading / Numeracy Tests with any pupils at our school				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %			
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
National Reading Test	55	46	16	11	10	22	3	5	105	109	30	25	152	144	43	33	7	4	2	1	23	106	7	25	352	431	100	100		
National Numeracy Tests	77	104	22	24	11	9	3	2	78	86	22	20	108	100	31	23	7	5	2	1	71	127	20	29	352	431	100	100		

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-19: Usefulness of the following types of support made available by the Welsh Government in delivering the Procedural Numeracy Test (2014)

	Very useful		Quite useful		Neutral		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
The test administration book	71	20	148	42	27	8	2	1	1	0	0	0	103	29	352	100
The sample materials	80	23	139	39	15	4	15	4	0	0	0	0	103	29	352	100
The diagnostic tool	49	14	112	32	39	11	25	7	10	3	12	3	105	30	352	100
Guidance on Access and Disapplication Arrangements	40	11	117	33	60	17	25	7	2	1	5	1	103	29	352	100
Technical Completion Notes on National Data Collection and Reporting Arrangements	31	9	114	32	72	20	10	3	4	1	16	5	105	30	352	100
National Data Collection – Questions and Answers	26	7	113	32	70	20	14	4	5	1	19	5	105	30	352	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-20: Usefulness of the following types of support made available by the Welsh Government in delivering the Numerical Reasoning Test (2014)

	Very useful		Quite useful		Neutral		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Test administration book	64	18	132	9	31	9	5	1	2	1	0	0	118	34	352	100
Sample materials	72	20	119	6	21	6	21	6	1	0	0	0	118	34	352	100
Diagnostic tool	33	9	94	12	43	12	31	9	14	4	19	5	118	34	352	100
Guidance on Access and Disapplication Arrangements	35	10	113	14	50	14	20	6	7	2	5	1	122	35	352	100
Technical Completion Notes on National Data Collection and Reporting Arrangements	24	7	104	22	77	22	10	3	4	1	13	4	120	34	352	100
National Data Collection – Questions and Answers	24	7	93	22	77	22	13	4	6	2	21	6	118	34	352	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-21: Usefulness of the following types of support made available by the Welsh Government in delivering the National Numeracy Tests (2015)

	Very useful		Quite useful		Neutral		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Test administration book	117	27	123	29	21	5	4	1	1	0	2	0	158	37	426	100
Sample materials	127	30	115	27	13	3	11	3	2	0	1	0	157	37	426	100
Diagnostic tool	74	17	117	27	39	9	24	6	8	2	7	2	157	37	426	100
Guidance on Access and Disapplication Arrangements	72	17	119	28	49	12	16	4	3	1	8	2	159	37	426	100
Technical Completion Notes on National Data Collection and Reporting Arrangements	58	14	125	29	61	14	5	1	1	0	17	4	159	37	426	100
National Data Collection – Questions and Answers	50	12	137	32	49	12	8	2	1	0	22	5	159	37	426	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-22: Usefulness of the following types of support made available by the Welsh Government in delivering the National Reading Test

	Very useful				Quite useful				Not very useful				Not at all useful				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Test administration book	104	137	30	35	173	127	49	33	7	6	2	2	2	2	1	1	9	5	3	1	57	110	16	28	352	387	100	100
Sample materials	109	144	31	37	152	106	43	27	27	17	8	4	2	6	1	2	4	4	1	1	58	110	16	28	352	387	100	100
Diagnostic tool	57	78	16	20	139	117	39	30	53	44	15	11	23	18	7	5	19	15	5	4	61	115	17	30	352	387	100	100
Guidance on Access and Disapplication Arrangements	60	91	17	24	168	130	48	34	39	33	11	9	8	8	2	2	20	15	6	4	57	110	16	28	352	387	100	100
Technical Completion Notes on National Data Collection and Reporting Arrangements	51	74	14	19	155	155	44	40	31	23	9	6	5	4	1	1	53	21	15	5	57	110	16	28	352	387	100	100
National Data Collection – Questions and Answers	30	62	9	16	161	155	46	40	38	24	11	6	10	2	3	1	54	34	15	9	59	110	17	28	352	387	100	100

Source: Survey of School Leaders 2014 & 2015

Type of question: Single-response

Table 0-23: Challenges experienced by staff in interpreting the marking scheme for the National Reading, Procedural Numeracy and Numerical Reasoning Test

	Not at all challenging				Not very challenging				Quite challenging				Very challenging				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
National Reading Test	92	51	26	12	121	105	34	25	61	105	17	25	27	43	8	10	8	12	2	3	43	111	12	26	352	427	100	100
Procedural Numeracy Test	69	2	20	0	104	6	30	1	62	37	18	9	25	29	7	7	3	4	1	1	89	348	25	82	352	426	100	100
Numerical Reasoning Test	38	6	11	1	86	10	24	2	71	38	20	9	51	17	14	4	3	6	1	1	103	349	29	82	352	426	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-24: Benefit to staff from additional support/guidance in delivering the Procedural Numeracy Test (2014)

	Yes, we would benefit from additional support / guidance		No, we wouldn't benefit from additional support / guidance		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
On the use of diagnostic tools	164	47	83	24	10	3	95	27	352	100
In the use of the marking scheme	85	24	165	47	7	2	95	27	352	100
In submitting test data to the Welsh Government	51	14	195	55	11	3	95	27	352	100
Other	14	4	84	24	159	45	95	27	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-25: Benefit to staff from additional support/guidance in delivering the Numerical Reasoning Test (2014)

	Yes, we would benefit from additional support / guidance		No, we wouldn't benefit from additional support / guidance		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
In how to use the stimulus materials	126	36	108	31	9	3	109	31	352	100
On the use of diagnostic tools	161	46	72	20	10	3	109	31	352	100
In the use of the marking scheme	113	32	123	35	7	2	109	31	352	100
In submitting test data to the Welsh Government	45	13	185	53	13	4	109	31	352	100
Other	7	2	71	20	165	47	109	31	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-26: Benefit to staff from additional support/guidance in delivering the National Numeracy Tests (2015)

	Yes, we would benefit from additional support / guidance		No, we wouldn't benefit from additional support / guidance		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
On the use of diagnostic tools	138	32	139	33	15	4	134	31	426	100
In the use of the marking scheme	80	19	199	47	14	3	133	31	426	100
In submitting test data to the Welsh Government	47	11	223	52	20	5	136	32	426	100
Other	6	1	55	13	32	8	333	78	426	100

Source: Survey of School Leaders 2015
Type of question: Single-response

Table 0-27: Benefit to staff from additional support/guidance in delivering the National Reading Test

	Yes, we would benefit from additional support / guidance				No, we wouldn't benefit from additional support / guidance				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
In the use of diagnostic tools	200	144	57	34	88	146	25	34	14	25	4	6	50	112	14	26	352	427	100	100
In the use of the marking scheme	103	72	29	17	189	219	54	51	10	23	3	5	50	113	14	26	352	427	100	100
In submitting test data to the Welsh Government	66	60	19	14	219	230	62	54	17	23	5	5	50	114	14	27	352	427	100	100
Other	23	9	7	2	90	39	26	9	189	50	54	12	50	329	14	77	352	427	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-28: Perceived ability of the Procedural Numeracy Test to assess the numeracy skills of pupils at school (2014)

	Very well		Quite well		Not very well		Not at all well		Not applicable		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
All pupils	21	6	147	42	51	14	22	6	0	0	13	4	98	28	352	100
More able/ gifted and talented pupils	48	14	145	41	30	9	15	4	1	0	14	4	99	28	352	100
Underperforming pupils	13	4	91	26	85	24	51	14	1	0	12	3	99	28	352	100
Pupils with Additional Learning Needs	12	3	46	13	74	21	108	31	2	1	13	4	97	28	352	100
People with Welsh and/ or English as an Additional language	2	1	40	11	49	14	49	14	61	17	52	15	99	28	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-29: Perceived ability of the Numerical Reasoning Test to assess the numeracy skills of pupils at school (2014)

	Very well		Quite well		Not very well		Not at all well		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
All pupils	23	7	116	33	61	17	18	5	24	7	110	31	352	100
More able/ gifted and talented pupils	50	14	118	34	34	10	12	3	27	8	111	32	352	100
Underperforming pupils	15	4	63	18	93	26	45	13	26	7	110	31	352	100
Pupils with Additional Learning Needs	10	3	24	7	82	23	84	24	40	11	112	32	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-30: Perceived ability of the National Numeracy Tests to assess the numeracy skills of pupils at school (2015)

	Very well		Quite well		Not very well		Not at all well		Not applicable		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
All pupils	34	8	176	41	44	10	20	5	0	0	11	3	141	33	426	100
More able/ gifted and talented pupils	84	20	148	35	26	6	16	4	0	0	11	3	141	33	426	100
Underperforming pupils	16	4	118	28	88	21	51	12	0	0	12	3	141	33	426	100
Pupils with Additional Learning Needs	13	3	79	19	91	21	89	21	0	0	12	3	142	33	426	100
People with Welsh and/ or English as an Additional language	5	1	63	15	50	12	46	11	85	20	28	7	149	35	426	100

Source: Survey of School Leaders 2015
Type of question: Single-response

Table 0-31: Perceived ability of the National Reading Test to assess the reading skills of pupils at school

	Very well				Quite well				Not very well				Not at all well				Not applicable				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
All pupils	12	27	3	6	164	187	47	44	61	41	17	10	25	21	7	5	2	2	1	0	26	25	7	6	62	124	18	29	352	427	100	100
More able/gifted and talented pupils	56	83	16	19	162	158	46	37	32	18	9	4	14	19	4	4	2	1	1	0	24	24	7	6	62	124	18	29	352	427	100	100
Underperforming pupils	11	18	3	4	97	109	28	26	76	84	22	20	71	64	20	15	1	2	0	0	24	25	7	6	72	125	20	29	352	427	100	100
Pupils with Additional Learning Needs	8	14	2	3	42	63	12	15	71	87	20	20	141	111	40	26	2	2	1	0	24	25	7	6	64	125	18	29	352	427	100	100
Pupils with Welsh and/or English as an Additional Language	1	4	0	1	31	54	9	13	49	46	14	11	75	56	21	13	77	92	22	22	56	46	16	11	63	129	18	30	352	427	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-32: Extent to which pupil level Procedural Numeracy Test data has been useful in supporting the teaching and learning in school (2014)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	55	16	134	38	40	11	13	4	13	4	97	28	352	100
Identifying particular teachers for targeted support	16	5	90	26	78	22	36	10	35	10	97	28	352	100
Supporting cross-curricular teaching	31	9	30	9	99	28	81	23	13	4	98	28	352	100
Raising the status of the subject	34	10	26	7	63	18	109	31	22	6	98	28	352	100
Other	179	51	32	9	30	9	8	2	5	1	97	28	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-33: Extent to which pupil level Procedural Numeracy Test data has been useful in supporting the teaching and learning in primary schools (2014)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	41	19	102	46	28	13	8	4	8	4	34	15	221	100
Identifying particular teachers for targeted support	15	7	74	33	72	33	21	10	27	12	34	15	221	100
Supporting cross-curricular teaching	11	5	59	27	72	33	22	10	23	10	34	15	221	100
Raising the status of the subject	18	8	74	33	51	23	20	9	24	11	34	15	221	100
Other	5	2	8	4	21	10	27	12	126	57	34	15	221	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-34: Extent to which pupil level Numerical Reasoning Test data has been useful in supporting the teaching and learning in school (2014)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	35	10	105	43	60	17	22	6	21	6	109	31	352	100
Identifying particular teachers for targeted support	16	5	70	35	85	24	43	12	29	8	109	31	352	100
Supporting cross-curricular teaching	14	4	71	41	88	25	36	10	34	10	109	31	352	100
Raising the status of the subject	27	8	88	40	69	20	31	9	28	8	109	31	352	100
Other	5	1	10	5	34	10	32	9	162	46	109	31	352	100

Source: Survey of School Leaders 2014
Type of question: Single-response

Table 0-35: Extent to which pupil level National Numeracy Test data has been useful in supporting the teaching and learning in school (2015)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	81	19	153	36	39	9	12	3	3	1	138	32	426	100
Identifying particular teachers for targeted support	30	7	122	29	74	17	40	9	17	4	143	34	426	100
Supporting lesson planning	25	6	119	28	46	11	14	3	5	1	217	51	426	100
Supporting cross-curricular teaching	34	8	146	34	76	18	24	6	8	2	138	32	426	100
Raising the status of the subject	60	14	140	33	53	12	25	6	8	2	140	33	426	100
Other	4	1	16	4	7	2	16	4	38	9	345	81	426	100

Source: Survey of School Leaders 2015
Type of question: Single-response

Table 0-36: Extent to which pupil level National Numeracy Test data has been useful in supporting the teaching and learning in primary schools (2015)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	60	23	101	39	31	12	9	4	1	0	55	21	257	100
Identifying particular teachers for targeted support	27	11	86	33	51	20	24	9	9	4	60	23	257	100
Supporting lesson planning	18	7	73	28	38	15	11	4	3	1	114	44	257	100
Supporting cross-curricular teaching	26	10	93	36	59	23	19	7	4	2	56	22	257	100
Raising the status of the subject	46	18	89	35	41	16	21	8	3	1	57	22	257	100
Other	3	1	10	4	7	3	13	5	27	11	197	77	257	100

Source: Survey of School Leaders 2015
Type of question: Single-response

Table 0-37: Extent to which pupil level National Numeracy Test data has been useful in supporting the teaching and learning in secondary schools (2015)

	Very useful		Quite useful		Not very useful		Not at all useful		Don't know / Not sure		Missing		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Identifying particular groups of pupils for targeted support	20	19	45	43	4	4	3	3	1	1	32	30	105	100
Identifying particular teachers for targeted support	3	3	30	29	18	17	15	14	7	7	32	30	105	100
Supporting lesson planning	7	7	39	37	4	4	3	3	2	2	50	48	105	100
Supporting cross-curricular teaching	8	8	45	43	13	12	5	5	3	3	31	30	105	100
Raising the status of the subject	13	12	44	42	9	9	4	4	3	3	32	30	105	100
Other	1	1	5	5	0	0	3	3	10	10	86	82	105	100

Source: Survey of School Leaders 2015
Type of question: Single-response

Table 0-38: Extent to which pupil level National Reading Test data has been useful in supporting the teaching and learning in school

	Very useful				Quite useful				Not very useful				Not at all useful				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Identifying individual/particular groups of pupils for targeted support	66	91	19	21	129	145	37	34	52	36	15	8	17	19	5	4	21	9	6	2	67	127	19	30	352	427	100	100
Identifying particular teachers for targeted support	21	36	6	8	79	100	22	23	93	87	26	20	51	51	14	12	41	25	12	6	67	128	19	30	352	427	100	100
Supporting cross-curricular teaching	19	29	5	7	70	120	20	28	114	104	32	24	43	32	12	7	38	15	11	4	68	127	19	30	352	427	100	100
Raising the status of the subject	27	58	8	14	106	130	30	30	82	66	23	15	34	31	10	7	35	14	10	3	68	128	19	30	352	427	100	100
Supporting lesson planning	-	36	-	8	-	145	-	34	-	77	-	18	-	26	-	6	-	13	-	3	-	130	-	30	-	427	-	100
Supporting curriculum-planning	22	44	6	10	100	149	28	35	88	67	25	16	39	28	11	7	35	12	10	3	68	127	19	30	352	427	100	100
Other	5	1	1	0	12	10	3	2	34	12	10	3	43	9	12	2	190	42	54	10	68	353	19	83	352	427	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-39: Extent to which pupil level National Reading Test data has been useful in supporting the teaching and learning in primary schools

	Very useful				Quite useful				Not very useful				Not at all useful				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Identifying individual/particular groups of pupils for targeted support	44	58	20	23	97	107	44	42	37	26	17	10	12	15	5	6	13	1	6	0	18	50	8	19	221	257	100	100
Identifying particular teachers for targeted support	14	31	6	12	66	78	30	30	67	54	30	21	26	32	12	12	30	11	14	4	18	51	8	20	221	257	100	100
Supporting cross-curricular teaching	12	23	5	9	46	80	21	31	86	71	39	28	31	28	14	11	28	4	13	2	18	51	8	20	221	257	100	100
Raising the status of the subject	15	40	7	16	75	90	34	35	58	48	26	19	30	23	14	9	25	4	11	2	18	52	8	20	221	257	100	100
Supporting lesson planning	-	24	-	9	-	99	-	39	-	55	-	21	-	21	-	8	-	4	-	2	-	54	-	21	-	257	-	100
Supporting curriculum-planning	12	30	5	12	65	98	29	38	65	52	29	20	34	23	15	9	27	3	12	1	18	51	8	20	221	257	100	100
Other	4	1	2	0	10	8	5	3	27	6	12	2	37	9	17	4	126	28	57	11	17	205	8	80	221	257	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-40: Extent to which pupil level National Reading Test data has been useful in supporting the teaching and learning in secondary schools

	Very useful				Quite useful				Not very useful				Not at all useful				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Identifying individual/particular groups of pupils for targeted support	21	31	23	30	30	32	33	30	11	7	12	7	3	2	3	2	5	7	5	7	22	26	24	25	92	105	100	100
Identifying particular teachers for targeted support	6	5	7	5	12	19	13	18	20	27	22	26	21	15	23	14	11	13	12	12	22	26	24	25	92	105	100	100
Supporting cross-curricular teaching	6	6	7	6	22	36	24	34	24	26	26	25	10	2	11	2	8	10	9	10	22	25	24	24	92	105	100	100
Raising the status of the subject	11	17	12	16	29	36	32	34	20	13	22	12	2	5	2	5	8	9	9	9	22	25	24	24	92	105	100	100
Supporting lesson planning	-	12	-	11	-	39	-	37	-	18	-	17	-	3	-	3	-	8	-	8	-	25	-	24	-	105	-	100
Supporting curriculum-planning	9	13	10	12	32	44	35	42	19	12	21	11	4	3	4	3	6	8	7	8	22	25	24	24	92	105	100	100
Other	1	0	1	0	2	1	2	1	5	4	5	4	5	0	5	0	57	14	62	13	22	86	24	82	92	105	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-41: Perceived impact of pupil level National Numeracy Test data on the quality of teaching and learning

	Frequency		Percent	
	2014	2015	2014	2015
Very positive impact	13	37	4	9
Fairly positive impact	85	143	24	34
Neither a positive nor a negative impact	111	87	32	20
Fairly negative impact	12	14	3	3
Very negative impact	7	5	2	1
Don't know/ Not sure	15	3	4	1
Missing	109	137	31	32
Total	352	426	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-42: Perceived impact of pupil level National Reading Test data on the quality of teaching and learning

	Frequency		Percent	
	2014	2015	2014	2015
Very positive impact	14	30	4	7
Fairly positive impact	90	139	26	33
Neither a positive nor a negative impact	130	98	37	23
Fairly negative impact	28	19	8	4
Very negative impact	5	5	1	1
Don't know/ Not sure	13	10	4	2
Missing	72	126	20	30
Total	352	427	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

The National Support Programme

Table 0-43: Access of support from the National Support Programme

	Frequency		Percent	
	2014	2015	2014	2015
Yes	225	257	64	60
No	21	38	6	9
Missing	106	136	30	32
Total	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-44: Reasons why some schools have not accessed support from the National Support Programme

	Frequency		Percent	
	2014	2015	2014	2015
We do not require support in embedding the Literacy and Numeracy Framework	5	11	24	29
We are not aware of what support is available from the National Support Programme	4	5	19	13
We do not know how to access support from the National Support Programme	2	4	10	11
We have accessed support from an alternative provider	1	12	5	32
We do not feel we are in a position to benefit from the support provided by the National Support Programme	2	4	10	11
Don't know/Not sure	3	7	14	18
Other	6	9	29	24

Source: Survey of School Leaders 2014 (N = 21) & 2015 (N = 38)
Type of question: Multi-response

Table 0-45: Types of support accessed from the National Support Programme

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
We received support in undertaking an audit of existing practice (Phase 1)	180	193	80	75
We received support in developing an action plan (Phase 2)	178	191	79	74
We received tailored support in order to deliver our school's action plan (Phase 3)	100	144	44	56
We received support to embed and sustain joint-working in our local area (Phase 4)	42	83	19	32
Don't know/Not sure	8	15	4	6
Other	13	13	6	5

Source: Survey of School Leaders 2014 (N = 225) & 2015 (N = 257)
Type of question: Multi-response

Table 0-46: Has your school faced any challenges in accessing support from the National Support Programme (NSP)?

	Very challenging				Quite challenging				Not very challenging				Not at all challenging				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Communicating with your NSP partner	11	17	3	4	27	46	8	12	72	71	20	18	101	107	29	27	11	9	3	2	130	143	37	36	352	393	100	100
Coordinating visits from your NSP partner	14	19	4	5	31	51	9	13	83	71	24	18	83	98	24	25	11	9	3	2	130	145	37	37	352	393	100	100
Engaging with local OTs (of Literacy and/or Numeracy)	53	62	15	16	47	55	13	14	30	38	9	10	32	35	9	9	60	56	17	14	130	147	37	37	352	393	100	100
Engaging with your local school improvement advisor	31	26	9	7	36	43	10	11	65	64	18	16	62	82	18	21	28	34	8	9	130	144	37	37	352	393	100	100
Using the support tools developed by the National Support Programme	29	23	8	6	61	68	17	17	66	79	19	20	40	59	11	15	26	21	7	5	130	143	37	36	352	393	100	100
Other	9	7	3	2	4	6	1	2	19	2	5	1	13	4	4	1	177	24	50	6	130	350	37	89	352	393	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-47: Helpfulness of the support provided to the school through the National Support Programme in embedding the Literacy and Numeracy Framework as a curriculum planning and assessment tool

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
Very helpful	25	45	7	11
Quite helpful	87	95	25	24
Neither helpful nor unhelpful	54	54	15	14
Quite unhelpful	32	32	9	8
Very unhelpful	16	22	5	6
Don't know/Not sure	8	5	2	1
Missing	130	140	37	36
Total	352	393	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-48: Access of any support (other than through the National Support Programme) to help embed the Literacy and Numeracy Framework as a curriculum planning and assessment tool

	Yes- this was helpful				Yes- but this was not helpful				The support accessed has been neither helpful nor unhelpful				We have not accessed any such support				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
From your local school improvement service	59	86	17	22	9	5	3	1	36	27	10	7	92	104	26	26	25	13	7	3	131	158	37	40	352	393	100	100
From your Regional Education Consortium	61	92	17	23	23	11	7	3	46	32	13	8	74	90	21	23	17	11	5	3	131	157	37	40	352	393	100	100
From a private provider	56	70	16	18	13	7	4	2	7	10	2	3	115	118	33	30	30	19	9	5	131	169	37	43	352	393	100	100
From other schools	116	126	33	32	7	14	2	4	18	18	5	5	67	67	19	17	13	11	4	3	131	157	37	40	352	393	100	100
Other	5	5	1	1	0	2	0	1	8	3	2	1	46	13	13	3	162	17	46	4	131	353	37	90	352	393	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-49: Perceived benefit to the school from any additional support in embedding the Literacy and Numeracy Framework as a curriculum planning and assessment tool

	Yes - we feel we would benefit				No - we don't feel we would benefit				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Additional support from your NSP partner	112	92	32	23	80	119	23	30	26	26	7	7	134	156	38	40	352	393	100	100
Additional support from your local school improvement service	121	121	34	31	70	89	20	23	27	30	8	8	134	153	38	39	352	393	100	100
Additional support from your Regional Educational Consortium	132	142	38	36	60	75	17	19	26	24	7	6	134	152	38	39	352	393	100	100
Additional support from an Outstanding Teacher (of Literacy and/or Numeracy)	135	146	38	37	52	73	15	19	31	26	9	7	134	148	38	38	352	393	100	100
Other	23	6	7	2	20	11	6	3	175	24	50	6	134	352	38	90	352	393	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

The Outstanding Teachers of Literacy and/or Numeracy Programme

Table 0-50: Access of support from an Outstanding Teacher not based at the school

	Central SW				North Wales				South East Wales				South West MW				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Yes	7	14	15	22	20	24	42	37	9	10	19	15	12	17	25	26	0	0	0	0	48	65	100	100
No	44	62	25	29	51	49	29	23	37	30	21	14	45	70	25	33	1	0	1	0	178	211	100	100
Don't know / Not sure	4	3	31	25	2	0	15	0	1	1	8	8	5	8	38	67	1	0	8	0	13	12	100	100
Missing	20	23	18	16	30	31	27	22	11	5	10	3	34	40	30	28	18	44	16	31	113	143	100	100
Total	75	102	21	24	103	104	29	24	58	46	16	11	96	135	27	31	20	44	6	10	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-51: Has your school faced any challenges in accessing support from an Outstanding Teacher who is not based at your school?

	Frequency		Percent	
	2014	2015	2014	2015
We are not aware of any Outstanding Teachers working in our local area	94	110	53	52
We do not have any staff in need of support	28	33	16	16
We are accessing similar support from a partner school	11	25	6	12
We are accessing similar support from a private provider	14	11	8	5
We cannot afford to cover the time spent by staff accessing support	13	31	7	15
Financially, we cannot afford to access support from an Outstanding Teacher	19	31	11	15
Don't know/not sure	17	17	10	8
Other	32	27	18	13

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-52: Challenges faced by the school in accessing support from an Outstanding Teacher not based at the school

	Very challenging				Quite challenging				Not very challenging				Not at all challenging				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Identify staff who would benefit from this type of support	0	3	0	5	10	8	21	12	17	10	35	15	17	29	35	45	3	8	6	12	1	7	2	11	48	65	100	100
Identify staff willing to receive support	0	4	0	6	11	7	23	11	19	9	40	14	15	26	31	40	2	9	4	14	1	10	2	15	48	65	100	100
Release staff in order that they can access support	9	9	19	14	15	16	31	25	12	8	25	12	9	17	19	26	2	8	4	12	1	7	2	11	48	65	100	100
Communicate with your Education Consortia lead	1	2	2	3	8	10	17	15	24	12	50	18	10	23	21	35	4	9	8	14	1	9	2	14	48	65	100	100
Identify a suitable Outstanding Teacher	3	4	6	6	10	7	21	11	18	12	38	18	11	24	23	37	5	10	10	15	1	8	2	12	48	65	100	100
Other	0	0	0	0	1	1	2	2	2	2	4	3	4	2	8	3	40	8	83	12	1	52	2	80	48	65	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-53: How effective have you found the support provided by Outstanding Teachers not based at your school in improving the quality of the literacy and numeracy teaching of Emerging Practitioners?

	Frequency		Percent	
	2014	2015	2014	2015
Very effective	9	22	19	34
Quite effective	18	18	38	28
Neither effective nor ineffective	8	8	17	12
Quite ineffective	1	3	2	5
Very ineffective	0	0	0	0
Don't know/Not sure	10	8	21	12
Missing	2	6	4	9
Total	48	65	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-54: Staff taking on the role of an Outstanding Teacher (of Literacy and/or Numeracy)

	Frequency		Percent	
	2014	2015	2014	2015
Yes	47	58	13	13
No	179	214	51	50
Don't know/Not sure	11	12	3	3
Missing	115	147	33	34
Total	352	431	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-55: Reasons why some schools have no staff that have taken on the role of an Outstanding Teacher

	Frequency		Percent	
	2014	**2015**	**2014**	**2015**
There are no staff at the school that have sufficient expertise to take on the role	16	23	9	11
No staff at the school have expressed an interest in taking on the role	74	83	41	39
We are reluctant to allow staff to take on this role as the attainment of pupils at this school could suffer	46	46	26	21
Staff are already involved in external mentoring/coaching	20	34	11	16
Financially, we cannot afford to release staff so that they can access training/deliver support	27	48	15	22
Don't know/not sure	22	33	12	15
Other	29	25	16	12
Total	179	214	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-56: Challenges faced by the school in supporting an Outstanding Teacher based in the school

	Very challenging				Quite challenging				Not very challenging				Not at all challenging				Don't know / Not sure				Missing				Total			
	Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %		Count		Row %	
	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
Release staff in order that they can access training/ deliver support	11	6	23	10	19	25	40	53	11	13	23	22	5	9	11	16	1	4	2	7	0	1	0	2	47	58	100	100
Communicate with your local Education Consortia lead	5	1	11	2	11	6	23	13	18	25	38	43	9	13	19	22	4	8	9	14	0	5	0	9	47	58	100	100
Identify a suitable candidate	0	2	0	3	3	7	6	15	21	18	45	31	20	22	43	38	3	5	6	9	0	4	0	7	47	58	100	100
Other	1	1	2	2	0	2	0	4	6	2	13	3	5	0	11	0	35	5	74	9	0	48	0	83	47	58	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-57: Perceived impact of being an Outstanding Teacher on the quality of their teaching

	Frequency		Percent	
	2014	2015	2014	2015
Very positive impact	22	24	47	41
Quite positive impact	19	17	40	29
Neither a positive nor a negative impact	4	10	9	17
Quite negative impact	0	2	0	3
Very negative impact	1	0	2	0
Don't know/Not sure	1	5	2	9
Missing	0	0	0	0
Total	47	58	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Table 0-58: Perceived impact of having an Outstanding Teacher on the school's staff body on the quality of teaching of literacy or numeracy across the school

	Frequency		Percent	
	2014	2015	2014	2015
Very positive impact	17	8	36	14
Quite positive impact	22	4	47	7
Neither a positive nor a negative impact	7	2	15	3
Quite negative impact	0	0	0	0
Very negative impact	0	0	0	0
Don't know/Not sure	0	0	0	0
Missing	1	44	2	76
Total	47	58	100	100

Source: Survey of School Leaders 2014 & 2015
Type of question: Single-response

Analysis of pupil-level data from the School Census 2011 to 2015

Table 0-1: Number and percentage of Key Stage 2 students by gender, ethnicity, free-school meals (FSM) eligibility, Special Educational Needs (SEN), and primary language medium between 2011 and 2015

			Year				
			2011	2012	2013	2014	2015
Total	Total	*n*	29,546	29,721	29,686	30,842	31,561
		%	*100%*	*100%*	*100%*	*100%*	*100%*
Gender	Male	*N*	15,217	15,289	15,292	15,783	16,243
		%	*52%*	*51%*	*52%*	*51%*	*51%*
	Female	*n*	14,329	14,432	14,394	15,059	15,318
		%	*48%*	*49%*	*48%*	*49%*	*49%*
Ethnicity	White	*n*	27,558	27,683	27,672	28,605	29,312
		%	*93%*	*93%*	*93%*	*93%*	*93%*
	Non-white	*n*	1,988	2,038	2,014	2,237	2,249
		%	*7%*	*7%*	*7%*	*7%*	*7%*
Free School Meals eligibility	Eligible	*n*	5,946	5,826	5,861	5,879	5,903
		%	*20%*	*20%*	*20%*	*19%*	*19%*
	Ineligible	*n*	23,600	23,895	23,825	24,963	25,658
		%	*80%*	*80%*	*80%*	*81%*	*81%*
Special Educational Needs	N	*n*	21,409	21,329	21,266	22,150	22,800
		%	*72%*	*72%*	*72%*	*72%*	*72%*
	AKP	*n*	7,155	7,468	7,494	7,733	7,809
		%	*24%*	*25%*	*25%*	*25%*	*25%*
	SE	*n*	982	924	926	959	952
		%	*3%*	*3%*	*3%*	*3%*	*3%*
Language	English	*n*	21,811	21,903	21,969	22,850	23,296
		%	*74%*	*74%*	*74%*	*74%*	*74%*
	Welsh	*n*	5,749	5,838	5,759	5,950	6,108
		%	*19%*	*20%*	*19%*	*19%*	*19%*
	Other	*n*	1,774	1,770	1,735	1,811	1,905
		%	*6%*	*6%*	*6%*	*6%*	*6%*
	Not specified	*n*	212	210	223	231	252
		%	*1%*	*1%*	*1%*	*1%*	*1%*

Source: SQW

Table 0-2: Number and percentage of Key Stage 3 students by gender, ethnicity, free-school meals (FSM) eligibility, Special Educational Needs (SEN), and primary language medium between 2011 and 2015

			Year				
			2011	2012	2013	2014	2015
Total	Total	*n*	33,626	32,922	32,511	32,054	31,449
		%	*100%*	*100%*	*100%*	*100%*	*100%*
Gender	Male	*N*	17,296	16,893	16,672	16,466	16,167
		%	*51%*	*51%*	*51%*	*51%*	*51%*
	Female	*n*	16,330	16,029	15,839	15,588	15,282
		%	*49%*	*49%*	*49%*	*49%*	*49%*
Ethnicity	White	*n*	31,783	30,994	30,584	29,978	29,436
		%	*95%*	*94%*	*94%*	*94%*	*94%*
	Non-white	*n*	1,843	1,928	1,927	2,076	2,013
		%	*5%*	*6%*	*6%*	*6%*	*6%*
Free School Meals eligibility	Eligible	*n*	6,122	5,763	5,757	5,686	5,623
		%	*18%*	*18%*	*18%*	*18%*	*18%*
	Ineligible	*n*	27,504	27,159	26,754	26,368	25,826
		%	*82%*	*82%*	*82%*	*82%*	*82%*
Special Educational Needs	N	*n*	25,929	25,184	24,531	23,574	23,034
		%	*77%*	*76%*	*75%*	*74%*	*73%*
	AKP	*n*	6,316	6,473	6,737	7,247	7,296
		%	*19%*	*20%*	*21%*	*23%*	*23%*
	SE	*n*	1,381	1,265	1,243	1,233	1,119
		%	*4%*	*4%*	*4%*	*4%*	*4%*
Language	English	*n*	25,473	24,994	24,564	24,079	23,538
		%	*76%*	*76%*	*76%*	*75%*	*75%*
	Welsh	*n*	2,763	2,709	2,667	2,630	2,633
		%	*8%*	*8%*	*8%*	*8%*	*8%*
	Other	*n*	4,800	4,667	4,728	4,822	4,793
		%	*14%*	*14%*	*15%*	*15%*	*15%*
	Not specified	*n*	590	552	552	523	485
		%	*2%*	*2%*	*2%*	*2%*	*2%*

Source: SQW

Table 0-3: Number and percentage of Key Stage 4 students by gender, ethnicity, free-school meals (FSM) eligibility, Special Educational Needs (SEN), and primary language medium between 2011 and 2015

			Year				
			2011	2012	2013	2014	2015
Total	Total	*n*	32,076	32,091	34,436	33,525	32,475
		%	*100%*	*100%*	*100%*	*100%*	*100%*
Gender	Male	*N*	16,293	16,415	17,636	17,140	16,558
		%	*51%*	*51%*	*51%*	*51%*	*51%*
	Female	*n*	15,783	15,676	16,800	16,385	15,917
		%	*49%*	*49%*	*49%*	*49%*	*49%*
Ethnicity	White	*n*	30,279	30,074	32,517	31,522	30,531
		%	*94%*	*94%*	*94%*	*94%*	*94%*
	Non-white	*n*	1,797	2,017	1,919	2,003	1,944
		%	*6%*	*6%*	*6%*	*6%*	*6%*
Free School Meals eligibility	Eligible	*n*	4,950	4,894	5,583	5,278	5,126
		%	*15%*	*15%*	*16%*	*16%*	*16%*
	Ineligible	*n*	27,126	27,197	28,853	28,247	27,349
		%	*85%*	*85%*	*84%*	*84%*	*84%*
Special Educational Needs	N	*n*	25,776	25,535	27,053	26,027	25,017
		%	*80%*	*80%*	*79%*	*78%*	*77%*
	AKP	*n*	5,178	5,450	6,183	6,382	6,373
		%	*16%*	*17%*	*18%*	*19%*	*20%*
	SE	*n*	1,122	1,106	1,200	1,116	1,085
		%	*3%*	*3%*	*3%*	*3%*	*3%*
Language	English	*n*	24,594	24,791	26,354	25,356	24,399
		%	*77%*	*77%*	*77%*	*76%*	*75%*
	Welsh	*n*	2,323	2,378	2,771	2,724	2,613
		%	*7%*	*7%*	*8%*	*8%*	*8%*
	Other	*n*	4,807	4,572	4,892	5,045	5,039
		%	*15%*	*14%*	*14%*	*15%*	*16%*
	Not specified	*n*	352	350	419	400	424
		%	*1%*	*1%*	*1%*	*1%*	*1%*

Source: SQW

Table 0-4: Percentage of students reaching the expected level of attainment in English, Welsh, Welsh as a 2nd Language and Maths at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

			Year				
			2011	**2012**	**2013**	**2014**	**2015**
English	KS2	*%*	84%	86%	88%	89%	90%
		n	29,478	29,649	29,598	30,737	31,453
	KS3	*%*	77%	80%	84%	87%	89%
		n	33,483	32,824	32,399	31,939	31,349
	KS4	*%*	68%	66%	67%	70%	72%
		n	30,232	30,471	32,834	32,283	31,441
Welsh	KS2	*%*	83%	85%	87%	88%	91%
		n	6,064	6,219	6,068	6,298	6,488
	KS3	*%*	82%	84%	88%	90%	91%
		n	5,443	5,360	5,435	5,535	5,630
	KS4	*%*	75%	73%	74%	74%	75%
		n	4,780	4,732	5,337	5,534	5,442
Welsh 2nd Language	KS2	*%*	52%	62%	68%	74%	77%
		n	22,850	22,964	22,235	23,040	24,087
	KS3	*%*	67%	70%	76%	80%	84%
		n	27,583	27,089	26,579	26,054	25,324
	KS4	*%*	72%	75%	78%	79%	81%
		n	10,661	9,017	9,736	10,239	10,801
Maths	KS2	*%*	85%	87%	88%	90%	91%
		n	29,482	29,651	29,598	30,736	31,453
	KS3	*%*	78%	82%	85%	87%	89%
		n	33,483	32,826	32,397	31,941	31,357
	KS4	*%*	62%	63%	64%	66%	68%
		n	29,867	30,230	32,607	31,800	31,115
Total	KS2	*n*	29,546	29,721	29,686	30,842	31,561
	KS3	*n*	33,626	32,922	32,511	32,054	31,449
	KS4	*n*	32,076	32,091	34,436	33,525	32,475

Source: SQW

Table 0-5: Percentage of students reaching the expected level of attainment in English by gender at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	**2012**	**2013**	**2014**	**2015**
Male	KS2	*%*	79%	82%	85%	86%	87%
		n	15175	15234	15233	15712	16172
		missing	42	55	59	71	71
	KS3	*%*	70%	73%	78%	82%	85%
		n	17207	16828	16596	16395	16101
		missing	89	65	76	71	66
	KS4	*%*	60%	59%	59%	62%	65%
		n	15089	15321	16547	16282	15866
		missing	1204	1094	1089	858	692
Female	KS2	*%*	89%	90%	91%	93%	93%
		n	14303	14415	14365	15025	15281
		missing	26	17	29	34	37
	KS3	*%*	84%	87%	89%	92%	93%
		n	16276	15996	15803	15544	15248
		missing	54	33	36	44	34
	KS4	*%*	76%	74%	75%	78%	80%
		n	15143	15150	16287	16001	15575
		missing	640	526	513	384	342

Source: SQW

Table 0-6: Percentage of students reaching the expected level of attainment in Welsh by gender at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	**2012**	**2013**	**2014**	**2015**
Male	KS2	*%*	78%	80%	83%	84%	88%
		n	3064	3069	3067	3115	3253
		missing	12153	12220	12225	12668	12990
	KS3	*%*	75%	78%	83%	86%	87%
		n	2633	2585	2692	2746	2736
		missing	14663	14308	13980	13720	13431
	KS4	*%*	66%	63%	64%	64%	66%
		n	2316	2297	2557	2641	2669
		missing	13977	14118	15079	14499	13889
Female	KS2	*%*	88%	89%	91%	93%	94%
		n	3000	3150	3001	3183	3235
		missing	11329	11282	11393	11876	12083
	KS3	*%*	88%	90%	93%	94%	94%
		n	2810	2775	2743	2789	2894
		missing	13520	13254	13096	12799	12388
	KS4	*%*	83%	83%	82%	82%	84%
		n	2464	2435	2780	2893	2773
		missing	13319	13241	14020	13492	13144

Source: SQW

Table 0-7: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by gender at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	45%	56%	62%	68%	71%
		n	11812	11905	11460	11860	12446
		missing	3405	3384	3832	3923	3797
	KS3	*%*	57%	61%	68%	73%	78%
		n	14257	13969	13628	13390	13086
		missing	3039	2924	3044	3076	3081
	KS4	*%*	62%	65%	68%	70%	73%
		n	4776	4017	4373	4636	4934
		missing	11517	12398	13263	12504	11624
Female	KS2	*%*	58%	69%	75%	80%	84%
		n	11038	11059	10775	11180	11641
		missing	3291	3373	3619	3879	3677
	KS3	*%*	77%	80%	84%	87%	90%
		n	13326	13120	12951	12664	12238
		missing	3004	2909	2888	2924	3044
	KS4	*%*	81%	84%	86%	87%	88%
		n	5885	5000	5363	5603	5867
		missing	9898	10676	11437	10782	10050

Source: SQW

Table 0-8: Percentage of students reaching the expected level of attainment in Maths by gender at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	84%	86%	87%	88%	89%
		n	15177	15237	15232	15712	16172
		missing	40	52	60	71	71
	KS3	*%*	76%	79%	82%	85%	88%
		n	17204	16828	16594	16397	16102
		missing	92	65	78	69	65
	KS4	*%*	62%	64%	65%	66%	69%
		n	15103	15329	16552	16137	15811
		missing	1190	1086	1084	1003	747
Female	KS2	*%*	87%	89%	90%	91%	93%
		n	14305	14414	14366	15024	15281
		missing	24	18	28	35	37
	KS3	*%*	81%	84%	87%	89%	91%
		n	16279	15998	15803	15544	15255
		missing	51	31	36	44	27
	KS4	*%*	61%	63%	64%	66%	68%
		n	14764	14901	16055	15663	15304
		missing	1019	775	745	722	613

Source: SQW

Table 0-9: Percentage of students reaching the expected level of attainment in English by ethnicity at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	**2012**	**2013**	**2014**	**2015**
Male	KS2	*%*	84%	86%	88%	89%	90%
		n	27499	27618	27590	28514	29217
		missing	59	65	82	91	95
	KS3	*%*	77%	80%	83%	87%	88%
		n	31647	30899	30475	29872	29345
		missing	136	95	109	106	91
	KS4	*%*	68%	66%	67%	70%	72%
		n	28530	28533	30991	30334	29552
		missing	1749	1541	1526	1188	979
Female	KS2	*%*	84%	86%	88%	90%	92%
		n	1979	2031	2008	2223	2236
		missing	9	7	6	14	13
	KS3	*%*	78%	81%	86%	87%	90%
		n	1836	1925	1924	2067	2004
		missing	7	3	3	9	9
	KS4	*%*	69%	71%	71%	74%	79%
		n	1702	1938	1843	1949	1889
		missing	95	79	76	54	55

Source: SQW

Table 0-10: Percentage of students reaching the expected level of attainment in Welsh by ethnicity at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	**2012**	**2013**	**2014**	**2015**
Male	KS2	*%*	83%	85%	87%	88%	91%
		n	5833	5945	5867	6106	6260
		missing	21725	21738	21805	22499	23052
	KS3	*%*	81%	85%	88%	90%	91%
		n	5239	5210	5298	5416	5492
		missing	26544	25784	25286	24562	23944
	KS4	*%*	74%	73%	73%	74%	75%
		n	4581	4574	5177	5396	5307
		missing	25698	25500	27340	26126	25224
Female	KS2	*%*	76%	76%	85%	89%	87%
		n	231	274	201	192	228
		missing	1757	1764	1813	2045	2021
	KS3	*%*	87%	82%	87%	87%	93%
		n	204	150	137	119	138
		missing	1639	1778	1790	1957	1875
	KS4	*%*	82%	75%	79%	70%	73%
		n	199	158	160	138	135
		missing	1598	1859	1759	1865	1809

Source: SQW

Table 0-11: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by ethnicity at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	51%	62%	68%	74%	77%
		n	21121	21263	20509	21200	22185
		missing	6437	6420	7163	7405	7127
	KS3	*%*	67%	70%	75%	80%	84%
		n	25979	25335	24816	24126	23487
		missing	5804	5659	5768	5852	5949
	KS4	*%*	72%	75%	78%	79%	81%
		n	10111	8582	9200	9505	10046
		missing	20168	21492	23317	22017	20485
Female	KS2	*%*	55%	63%	69%	74%	77%
		n	1729	1701	1726	1840	1902
		missing	259	337	288	397	347
	KS3	*%*	68%	71%	79%	81%	83%
		n	25979	25335	24816	24126	23487
		missing	5804	5659	5768	5852	5949
	KS4	*%*	71%	80%	79%	76%	76%
		n	550	435	536	734	755
		missing	1247	1582	1383	1269	1189

Source: SQW

Table 0-12: Percentage of students reaching the expected level of attainment in Maths by ethnicity at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	85%	87%	88%	89%	0%
		n	27502	27620	27590	28514	29217
		missing	56	63	82	91	95
	KS3	*%*	78%	81%	84%	87%	89%
		n	31646	30901	30473	29873	29352
		missing	137	93	111	105	84
	KS4	*%*	62%	63%	64%	66%	68%
		n	28188	28310	30773	29901	29271
		missing	2091	1764	1744	1621	1260
Female	KS2	*%*	84%	87%	89%	91%	92%
		n	1980	2031	2008	2222	2236
		missing	8	7	6	15	13
	KS3	*%*	82%	85%	88%	90%	91%
		n	1837	1925	1924	2068	2005
		missing	6	3	3	8	8
	KS4	*%*	63%	67%	67%	69%	73%
		n	1679	1920	1834	1899	1844
		missing	118	97	85	104	100

Source: SQW

Table 0-13: Percentage of students reaching the expected level of attainment in English by FSM eligibility at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	2012	2013	2014	2015
Male	KS2	%	69%	71%	75%	77%	79%
		n	5922	5804	5827	5844	5859
		missing	24	22	34	35	44
	KS3	%	56%	60%	65%	70%	74%
		n	6063	5717	5717	5635	5575
		missing	59	46	40	51	48
	KS4	%	43%	41%	42%	45%	50%
		n	4172	4252	4903	4721	4633
		missing	778	642	680	557	493
Female	KS2	%	88%	89%	91%	92%	93%
		n	23556	23845	23771	24893	25594
		missing	44	50	54	70	64
	KS3	%	81%	84%	88%	90%	92%
		n	27420	27107	26682	26304	25774
		missing	84	52	72	64	52
	KS4	%	72%	71%	71%	74%	76%
		n	26060	26219	27931	27562	26808
		missing	1066	978	922	685	541

Source: SQW

Table 0-14: Percentage of students reaching the expected level of attainment in Welsh by FSM eligibility at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	2012	2013	2014	2015
Male	KS2	%	68%	69%	70%	71%	77%
		n	816	834	743	683	712
		missing	5130	4992	5118	5196	5191
	KS3	%	60%	63%	72%	76%	81%
		n	566	489	541	509	550
		missing	5556	5274	5216	5177	5073
	KS4	%	49%	45%	54%	49%	52%
		n	350	388	459	427	430
		missing	4600	4506	5124	4851	4696
Female	KS2	%	85%	87%	90%	91%	92%
		n	5248	5385	5325	5615	5776
		missing	18352	18510	18500	19348	19882
	KS3	%	84%	87%	90%	92%	92%
		n	4877	4871	4894	5026	5080
		missing	22627	22288	21860	21342	20746
	KS4	%	77%	76%	75%	76%	77%
		n	4430	4344	4878	5107	5012
		missing	22696	22853	23975	23140	22337

Source: SQW

Table 0-15: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by FSM eligibility at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	36%	43%	52%	57%	62%
		n	5009	4838	4788	4798	4890
		missing	937	988	1073	1081	1013
	KS3	*%*	46%	48%	55%	62%	67%
		n	5333	5098	5020	4996	4866
		missing	789	665	737	690	757
	KS4	*%*	55%	57%	63%	64%	63%
		n	1180	1000	1135	1137	1283
		missing	3770	3894	4448	4141	3843
Female	KS2	*%*	56%	67%	73%	79%	81%
		n	17841	18126	17447	18242	19197
		missing	5759	5769	6378	6721	6461
	KS3	*%*	72%	75%	80%	84%	87%
		n	22250	21991	21559	21058	20458
		missing	5254	5168	5195	5310	5368
	KS4	*%*	75%	78%	80%	81%	83%
		n	9481	8017	8601	9102	9518
		missing	17645	19180	20252	19145	17831

Source: SQW

Table 0-16: Percentage of students reaching the expected level of attainment in Maths by FSM eligibility at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	2012	2013	2014	2015
Male	KS2	*%*	71%	74%	76%	78%	81%
		n	5923	5805	5828	5845	5859
		missing	23	21	33	34	44
	KS3	*%*	59%	62%	66%	72%	75%
		n	6061	5718	5713	5634	5576
		missing	61	45	44	52	47
	KS4	*%*	36%	38%	39%	41%	45%
		n	4061	4145	4810	4482	4486
		missing	889	749	773	796	640
Female	KS2	*%*	89%	91%	91%	92%	93%
		n	23559	23846	23770	24891	25594
		missing	41	49	55	72	64
	KS3	*%*	83%	86%	89%	90%	92%
		n	27422	27108	26684	26307	25781
		missing	82	51	70	61	45
	KS4	*%*	66%	67%	69%	70%	72%
		n	25806	26085	27797	27318	26629
		missing	1320	1112	1056	929	720

Source: SQW

Table 0-17: Percentage of students reaching the expected level of attainment in English by SEN status at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	**2012**	**2013**	**2014**	**2015**
N	KS2	*%*	97%	98%	99%	99%	99%
		n	21405	21323	21264	22141	22796
		missing	4	6	2	9	4
	KS3	*%*	88%	91%	94%	96%	97%
		n	25901	25165	24510	23562	23022
		missing	28	19	21	12	12
	KS4	*%*	75%	75%	75%	79%	82%
		n	25252	25106	26677	25790	24842
		missing	524	429	376	237	175
AKP	KS2	*%*	54%	59%	65%	69%	72%
		n	7138	7456	7482	7719	7797
		missing	17	12	12	14	12
	KS3	*%*	42%	49%	57%	66%	70%
		n	6277	6435	6721	7216	7271
		missing	39	38	16	31	25
	KS4	*%*	30%	30%	29%	34%	39%
		n	4373	4761	5479	5855	5972
		missing	805	689	704	527	401
SE	KS2	*%*	21%	22%	23%	25%	25%
		n	935	870	852	877	860
		missing	47	54	74	82	92
	KS3	*%*	18%	19%	22%	26%	29%
		n	1305	1224	1168	1161	1056
		missing	76	41	75	72	63
	KS4	*%*	25%	22%	24%	23%	29%
		n	607	604	678	638	627
		missing	515	502	522	478	458

Source: SQW

Table 0-18: Percentage of students reaching the expected level of attainment in Welsh by SEN status at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	**2012**	**2013**	**2014**	**2015**
N	KS2	*%*	94%	96%	97%	98%	99%
		n	4400	4450	4394	4537	4668
		missing	17009	16879	16872	17613	18132
	KS3	*%*	90%	93%	95%	97%	97%
		n	4405	4298	4359	4243	4303
		missing	21524	20886	20172	19331	18731
	KS4	*%*	80%	79%	80%	80%	82%
		n	4088	4036	4510	4703	4563
		missing	21688	21499	22543	21324	20454
AKP	KS2	*%*	54%	58%	62%	67%	72%
		n	1527	1667	1585	1641	1729
		missing	5628	5801	5909	6092	6080
	KS3	*%*	47%	54%	62%	72%	73%
		n	926	956	969	1192	1239
		missing	5390	5517	5768	6055	6057
	KS4	*%*	41%	41%	39%	38%	42%
		n	634	632	759	774	804
		missing	4544	4818	5424	5608	5569
SE	KS2	*%*	21%	29%	28%	30%	24%
		n	137	102	89	120	91
		missing	845	822	837	839	861
	KS3	*%*	28%	26%	32%	28%	42%
		n	112	106	107	100	88
		missing	1269	1159	1136	1133	1031
	KS4	*%*	40%	28%	29%	35%	33%
		n	58	64	68	57	75
		missing	1064	1042	1132	1059	1010

Source: SQW

Table 0-19: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by SEN status at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	**2012**	**2013**	**2014**	**2015**
N	KS2	*%*	63%	75%	82%	87%	90%
		n	16624	16605	15986	16655	17585
		missing	4785	4724	5280	5495	5215
	KS3	*%*	77%	81%	86%	90%	92%
		n	21426	20812	20107	19288	18677
		missing	4503	4372	4424	4286	4357
	KS4	*%*	77%	80%	81%	82%	84%
		n	9362	7860	8392	8815	9185
		missing	16414	17675	18661	17212	15832
AKP	KS2	*%*	22%	30%	36%	43%	47%
		n	5497	5676	5595	5727	5829
		missing	1658	1792	1899	2006	1980
	KS3	*%*	35%	36%	47%	56%	63%
		n	5216	5381	5650	5911	5902
		missing	1100	1092	1087	1336	1394
	KS4	*%*	42%	48%	56%	63%	61%
		n	1177	1047	1215	1318	1510
		missing	4001	4403	4968	5064	4863
SE	KS2	*%*	9%	9%	10%	13%	13%
		n	729	683	654	658	673
		missing	253	241	272	301	279
	KS3	*%*	12%	12%	18%	20%	26%
		n	941	896	822	855	745
		missing	440	369	421	378	374
	KS4	*%*	47%	46%	57%	50%	63%
		n	122	110	129	106	106
		missing	1000	996	1071	1010	979

Source: SQW

Table 0-20: Percentage of students reaching the expected level of attainment in Maths by SEN status at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	**2012**	**2013**	**2014**	**2015**
N	KS2	*%*	96%	97%	98%	98%	99%
		n	21407	21323	21264	22141	22796
		missing	2	6	2	9	4
	KS3	*%*	89%	92%	94%	96%	97%
		n	25901	25167	24509	23559	23027
		missing	28	17	22	15	7
	KS4	*%*	68%	70%	72%	74%	76%
		n	25052	24957	26548	25596	24713
		missing	724	578	505	431	304
AKP	KS2	*%*	60%	65%	68%	71%	74%
		n	7139	7456	7482	7718	7797
		missing	16	12	12	15	12
	KS3	*%*	47%	53%	60%	68%	73%
		n	6278	6444	6720	7222	7276
		missing	38	29	17	25	20
	KS4	*%*	31%	33%	33%	35%	38%
		n	4221	4655	5374	5569	5753
		missing	957	795	809	813	620
SE	KS2	*%*	23%	25%	24%	27%	27%
		n	936	872	852	877	860
		missing	46	52	74	82	92
	KS3	*%*	22%	23%	27%	29%	31%
		n	1304	1215	1168	1160	1054
		missing	77	50	75	73	65
	KS4	*%*	27%	29%	29%	25%	31%
		n	594	618	685	635	649
		missing	528	488	515	481	436

Source: SQW

Table 0-21: Percentage of students reaching the expected level of attainment in English by School Language Medium at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	2012	2013	2014	2015
English medium	KS2	%	84%	86%	88%	89%	90%
		n	21784	21873	21936	22809	23260
		missing	27	30	33	41	36
	KS3	%	77%	80%	84%	87%	89%
		n	25387	24939	24509	24021	23493
		missing	86	55	55	58	45
	KS4	%	66%	66%	66%	69%	72%
		n	23216	23615	25248	24545	23757
		missing	1378	1176	1106	811	642
Welsh medium	KS2	%	87%	89%	90%	91%	92%
		n	5736	5830	5748	5943	6102
		missing	13	8	11	7	6
	KS3	%	82%	85%	88%	90%	92%
		n	2761	2707	2666	2629	2631
		missing	2	2	1	1	2
	KS4	%	75%	71%	72%	75%	75%
		n	2251	2300	2692	2672	2589
		missing	72	78	79	52	24
Other	KS2	%	85%	87%	88%	90%	92%
		n	1767	1761	1730	1805	1894
		missing	7	9	5	6	11
	KS3	%	81%	85%	87%	91%	91%
		n	4795	4657	4719	4810	4788
		missing	5	10	9	12	5
	KS4	%	72%	68%	70%	72%	74%
		n	4617	4397	4736	4911	4924
		missing	190	175	156	134	115
Language not specified	KS2	%	2%	4%	1%	3%	4%
		n	191	185	184	180	197
		missing	21	25	39	51	55
	KS3	%	20%	23%	28%	27%	28%
		n	540	521	505	479	437
		missing	50	31	47	44	48
	KS4	%	75%	71%	72%	75%	75%
		n	148	159	158	155	171
		missing	204	191	261	245	253

Source: SQW

Table 0-22: Percentage of students reaching the expected level of attainment in Welsh by School Language Medium at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	**2012**	**2013**	**2014**	**2015**
English medium	KS2	*%*	.	100%	67%	100%	.
		n	0	1	3	1	0
		missing	21811	21902	21966	22849	23296
	KS3	*%*	78%	88%	94%	79%	84%
		n	78	49	65	58	73
		missing	25395	24945	24499	24021	23465
	KS4	*%*	53%	47%	55%	63%	59%
		n	76	91	67	52	71
		missing	24518	24700	26287	25304	24328
Welsh medium	KS2	*%*	84%	85%	87%	89%	91%
		n	5577	5755	5602	5787	5932
		missing	172	83	157	163	176
	KS3	*%*	80%	84%	87%	90%	91%
		n	2737	2689	2652	2613	2610
		missing	26	20	15	17	23
	KS4	*%*	75%	75%	76%	77%	76%
		n	2204	2249	2650	2632	2543
		missing	119	129	121	92	70
Other	KS2	*%*	73%	84%	88%	88%	93%
		n	481	454	458	503	547
		missing	1293	1316	1277	1308	1358
	KS3	*%*	83%	86%	89%	91%	91%
		n	2496	2475	2567	2722	2810
		missing	2304	2192	2161	2100	1983
	KS4	*%*	75%	73%	71%	71%	75%
		n	2376	2258	2499	2717	2690
		missing	2431	2314	2393	2328	2349
Language not specified	KS2	*%*	.	.	.	.	.
		n	6	9	5	7	9
		missing	206	201	218	224	243
	KS3	*%*	79%	77%	89%	85%	83%
		n	132	147	151	142	137
		missing	458	405	401	381	348
	KS4	*%*	73%	74%	83%	79%	78%
		n	124	134	121	133	138
		missing	228	216	298	267	286

Source: SQW

Table 0-23: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by School Language Medium at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	2012	2013	2014	2015
English medium	KS2	*%*	52%	63%	69%	75%	78%
		n	21254	21509	20742	21561	22523
		missing	557	394	1227	1289	773
	KS3	*%*	67%	71%	76%	81%	85%
		n	24931	24590	24125	23654	23079
		missing	542	404	439	425	459
	KS4	*%*	72%	76%	78%	79%	81%
		n	7423	7219	7788	8399	8876
		missing	17171	17572	18566	16957	15523
Welsh medium	KS2	*%*	59%	78%	53%	78%	80%
		n	150	55	133	119	109
		missing	5599	5783	5626	5831	5999
	KS3	*%*	65%	75%	64%	65%	90%
		n	23	16	14	17	21
		missing	2740	2693	2653	2613	2612
	KS4	*%*	71%	68%	83%	100%	80%
		n	520	25	18	9	10
		missing	1803	2353	2753	2715	2603
Other	KS2	*%*	58%	62%	68%	74%	79%
		n	1276	1250	1229	1220	1295
		missing	498	520	506	591	610
	KS3	*%*	71%	71%	77%	80%	83%
		n	2256	2145	2128	2056	1948
		missing	2544	2522	2600	2766	2845
	KS4	*%*	74%	74%	78%	78%	81%
		n	2718	1773	1930	1831	1915
		missing	2089	2799	2962	3214	3124
Language not specified	KS2	*%*	20%	29%	41%	39%	37%
		n	170	150	131	140	160
		missing	42	60	92	91	92
	KS3	*%*	.	0%	1%	.	.
		n	373	338	312	327	276
		missing	217	214	240	196	209
	KS4	*%*	.	1%	.	.	1%
		n	0	0	0	0	0
		missing	352	350	419	400	424

Source: SQW

Table 0-24: Percentage of students reaching the expected level of attainment in Maths by School Language Medium at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	**2012**	**2013**	**2014**	**2015**
English medium	KS2	*%*	85%	87%	88%	90%	91%
		n	21787	21872	21936	22809	23259
		missing	24	31	33	41	37
	KS3	*%*	79%	82%	85%	87%	89%
		n	25389	24950	24508	24021	23505
		missing	84	44	56	58	33
	KS4	*%*	60%	62%	63%	65%	67%
		n	22877	23403	24988	24061	23430
		missing	1717	1388	1366	1295	969
Welsh medium	KS2	*%*	88%	90%	90%	91%	93%
		n	5737	5830	5749	5943	6102
		missing	12	8	10	7	6
	KS3	*%*	82%	85%	87%	90%	92%
		n	2761	2707	2666	2630	2631
		missing	2	2	1	0	2
	KS4	*%*	66%	67%	69%	69%	71%
		n	2233	2298	2706	2667	2574
		missing	90	80	65	57	39
Other	KS2	*%*	86%	88%	88%	90%	92%
		n	1767	1761	1730	1805	1894
		missing	7	9	5	6	11
	KS3	*%*	82%	86%	88%	91%	92%
		n	4794	4657	4720	4811	4787
		missing	6	10	8	11	6
	KS4	*%*	68%	68%	68%	69%	71%
		n	4610	4365	4744	4898	4936
		missing	197	207	148	147	103
Language not specified	KS2	*%*	1%	2%	.	3%	4%
		n	191	188	183	179	198
		missing	21	22	40	52	54
	KS3	*%*	20%	23%	27%	27%	27%
		n	539	512	503	479	434
		missing	51	40	49	44	51
	KS4	*%*	67%	54%	55%	60%	60%
		n	147	164	169	174	175
		missing	205	186	250	226	249

Source: SQW

Table 0-25: Percentage of students reaching the expected level of attainment in English by IMD Quintile at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

English			Year				
			2011	2012	2013	2014	2015
Q1	KS2	*%*	78%	80%	84%	84%	87%
		n	6203	6085	6144	6118	6518
		missing	18	14	22	36	44
	KS3	*%*	71%	76%	80%	83%	85%
		n	6876	6808	6515	6714	6513
		missing	19	21	32	24	38
	KS4	*%*	62%	61%	62%	65%	69%
		n	6215	6234	6563	6722	6385
		missing	452	406	381	238	229
Q2	KS2	*%*	82%	83%	86%	87%	88%
		n	6516	6418	6343	6798	6905
		missing	19	19	18	24	29
	KS3	*%*	75%	78%	82%	85%	87%
		n	6745	6388	6025	6110	5705
		missing	42	21	13	20	15
	KS4	*%*	65%	63%	65%	67%	69%
		n	5929	5814	6245	6240	5857
		missing	475	459	416	311	195
Q3	KS2	*%*	85%	87%	88%	90%	91%
		n	6293	6547	6545	6776	6972
		missing	10	12	10	12	8
	KS3	*%*	77%	80%	84%	87%	89%
		n	6675	6438	6703	6019	5872
		missing	35	14	14	17	14
	KS4	*%*	66%	65%	65%	70%	72%
		n	6092	6180	6695	6206	6112
		missing	382	251	257	198	169
Q4	KS2	*%*	87%	89%	90%	92%	93%
		n	6207	6328	6348	6586	6634
		missing	15	16	19	19	21
	KS3	*%*	78%	81%	85%	88%	89%
		n	6448	6200	6301	6383	6529
		missing	27	23	20	29	19
	KS4	*%*	69%	68%	68%	72%	73%
		n	5627	5664	6467	6452	6513
		missing	299	301	316	297	272
Q5	KS2	*%*	90%	92%	93%	94%	94%
		n	4259	4271	4218	4459	4424
		missing	6	11	19	14	6
	KS3	*%*	83%	85%	88%	90%	92%
		n	6739	6990	6855	6713	6730
		missing	20	19	33	25	14
	KS4	*%*	75%	75%	73%	76%	79%
		n	6369	6579	6864	6663	6574
		missing	236	203	232	198	169

Source: SQW

Table 0-26: Percentage of students reaching the expected level of attainment in Welsh by IMD Quintile at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh			Year				
			2011	2012	2013	2014	2015
Q1	KS2	*%*	83%	82%	88%	88%	91%
		n	875	900	889	867	960
		missing	5346	5199	5277	5287	5602
	KS3	*%*	77%	82%	88%	93%	92%
		n	725	732	705	566	560
		missing	6170	6097	5842	6172	5991
	KS4	*%*	74%	71%	75%	75%	78%
		n	577	658	678	569	555
		missing	6090	5982	6266	6391	6059
Q2	KS2	*%*	83%	83%	87%	89%	90%
		n	1262	1299	1298	1458	1486
		missing	5273	5138	5063	5364	5448
	KS3	*%*	80%	82%	86%	89%	87%
		n	1132	1235	1170	1092	1165
		missing	5655	5174	4868	5038	4555
	KS4	*%*	71%	71%	72%	71%	69%
		n	1073	1009	1069	1165	1114
		missing	5331	5264	5592	5386	4938
Q3	KS2	*%*	82%	85%	86%	88%	90%
		n	2010	2025	1973	1971	2086
		missing	4293	4534	4582	4817	4894
	KS3	*%*	83%	86%	87%	90%	92%
		n	1732	1648	1798	1682	1642
		missing	4978	4804	4919	4354	4244
	KS4	*%*	76%	77%	75%	77%	78%
		n	1571	1563	1718	1665	1734
		missing	4903	4868	5234	4739	4547
Q4	KS2	*%*	83%	86%	88%	88%	91%
		n	1466	1562	1484	1560	1554
		missing	4756	4782	4883	5045	5101
	KS3	*%*	83%	86%	90%	90%	90%
		n	946	911	920	1151	1174
		missing	5529	5312	5401	5261	5374
	KS4	*%*	80%	73%	72%	70%	76%
		n	718	662	959	1182	1072
		missing	5208	5303	5824	5567	5713
Q5	KS2	*%*	86%	90%	88%	91%	94%
		n	451	433	424	442	402
		missing	3814	3849	3813	4031	4028
	KS3	*%*	83%	86%	90%	90%	93%
		n	908	834	842	1044	1089
		missing	5851	6175	6046	5694	5655
	KS4	*%*	73%	72%	73%	75%	74%
		n	841	840	913	953	967
		missing	5764	5942	6183	5908	5776

Source: SQW

Table 0-27: Percentage of students reaching the expected level of attainment in Welsh as a 2nd Language by IMD Quintile at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Welsh as a 2nd Language			Year				
			2011	2012	2013	2014	2015
Q1	KS2	*%*	43%	54%	62%	68%	71%
		n	5284	5057	4982	4935	5214
		missing	937	1042	1184	1219	1348
	KS3	*%*	62%	66%	72%	76%	80%
		n	6067	6007	5730	6084	5844
		missing	828	822	817	654	707
	KS4	*%*	72%	76%	75%	76%	76%
		n	1701	1428	1517	1770	2079
		missing	4966	5212	5427	5190	4535
Q2	KS2	*%*	50%	60%	65%	72%	74%
		n	5098	5077	4742	5060	5314
		missing	1437	1360	1619	1762	1620
	KS3	*%*	63%	66%	71%	78%	85%
		n	5529	5091	4803	4969	4507
		missing	1258	1318	1235	1161	1213
	KS4	*%*	70%	66%	74%	78%	80%
		n	2406	2095	2162	1957	1996
		missing	3998	4178	4499	4594	4056
Q3	KS2	*%*	53%	63%	68%	74%	78%
		n	4190	4485	4288	4544	4718
		missing	2113	2074	2267	2244	2262
	KS3	*%*	65%	70%	75%	80%	82%
		n	4852	4708	4827	4265	4169
		missing	1858	1744	1890	1771	1717
	KS4	*%*	73%	78%	78%	80%	82%
		n	1942	1595	1797	1833	1772
		missing	4532	4836	5155	4571	4509
Q4	KS2	*%*	54%	65%	72%	78%	81%
		n	4610	4581	4568	4760	4913
		missing	1612	1763	1799	1845	1742
	KS3	*%*	70%	72%	78%	82%	83%
		n	5411	5209	5292	5142	5269
		missing	1064	1014	1029	1270	1279
	KS4	*%*	69%	77%	81%	77%	78%
		n	2299	1789	1992	2375	2648
		missing	3627	4176	4791	4374	4137
Q5	KS2	*%*	61%	71%	78%	80%	83%
		n	3668	3764	3655	3741	3928
		missing	597	518	582	732	502
	KS3	*%*	73%	75%	80%	83%	87%
		n	5724	6074	5927	5594	5535
		missing	1035	935	961	1144	1209
	KS4	*%*	78%	81%	81%	85%	88%
		n	2313	2110	2268	2304	2306
		missing	4292	4672	4828	4557	4437

Source: SQW

Table 0-28: Percentage of students reaching the expected level of attainment in Maths by IMD Quintile at each Key Stage between 2011 and 2015 (n=the sample total of students sitting each exam)

Maths			Year				
			2011	2012	2013	2014	2015
Q1	KS2	%	80%	82%	84%	85%	88%
		n	6203	6085	6142	6119	6517
		missing	18	14	24	35	45
	KS3	%	74%	78%	82%	85%	88%
		n	6875	6809	6513	6712	6515
		missing	20	20	34	26	36
	KS4	%	54%	55%	58%	60%	63%
		n	6120	6183	6491	6506	6226
		missing	547	457	453	454	388
Q2	KS2	%	83%	85%	86%	88%	89%
		n	6518	6417	6343	6798	6903
		missing	17	20	18	24	31
	KS3	%	77%	80%	83%	85%	88%
		n	6746	6388	6027	6113	5711
		missing	41	21	11	17	9
	KS4	%	56%	58%	62%	62%	66%
		n	5895	5808	6226	6161	5792
		missing	509	465	435	390	260
Q3	KS2	%	86%	89%	89%	90%	91%
		n	6294	6547	6544	6775	6973
		missing	9	12	11	13	7
	KS3	%	78%	82%	84%	88%	90%
		n	6676	6442	6703	6016	5873
		missing	34	10	14	20	13
	KS4	%	62%	63%	63%	66%	68%
		n	5992	6144	6679	6154	6088
		missing	482	287	273	250	193
Q4	KS2	%	88%	89%	90%	91%	93%
		n	6208	6330	6351	6585	6636
		missing	14	14	16	20	19
	KS3	%	79%	81%	86%	87%	89%
		n	6448	6199	6301	6387	6526
		missing	27	24	20	25	22
	KS4	%	65%	66%	67%	70%	70%
		n	5548	5613	6407	6390	6473
		missing	378	352	376	359	312
Q5	KS2	%	90%	92%	93%	93%	94%
		n	4259	4272	4218	4459	4424
		missing	6	10	19	14	6
	KS3	%	84%	87%	88%	90%	92%
		n	6738	6988	6853	6713	6732
		missing	21	21	35	25	12
	KS4	%	73%	73%	71%	74%	75%
		n	6312	6482	6804	6589	6536
		missing	293	300	292	272	207

Source: SQW

Table 0-29: Multi-level analysis of KS2 attainment in English, Welsh, Welsh as a 2nd Language, and Maths between 2011 and 2015

Variable name	Description
FEM=	Female (Gender)
0	*Male*
1	*Female*
ETH=	Ethnicity
0	*White*
1	*Non-white*
FSM=	Free School Meals eligibility
0	*Ineligible*
1	*Eligible*
SEN=	Special Educational Needs
0	*No Special Educational Needs*
1	*Additional support needed*
2	*Statement of needs*
LANG= (ks2/3/4_LANG in the cohort analysis)	Language Medium primarily taught in school
0	*English*
1	*Welsh*
2	*Other*
3	*Language not specified*
Year=	Year
2011	*2011*
2012	*2012*
2013	*2013*
2014	*2014*
2015	*2015*
cohort	Pupil cohort
1	*Key Stage 2 to 3 (2011-2014)*
2	*Key Stage 2 to 3 (2012-2015)*
3	*Key Stage 3 to 4 (2011-2013)*
4	*Key Stage 3 to 4 (2012-2014)*
5	*Key Stage 3 to 4 (2013-2015)*
fsm_school	Average Free School Meal eligibility in School
size	School size (pupils)
Interactions	
Year by Female	Base case (Year=2011 * FEM=0 - Male)
Year=2012 # FE~1	*Year (2012) * FEM=1*
Year=2013 # FE~1	*Year (2013) * FEM=1*
Year=2014 # FE~1	*Year (2014) * FEM=1*
Year=2015 # FE~1	*Year (2015) * FEM=1*
Year by Ethnicity	Base case (Year=2011 * ETH=0 - White)
Year=2012 # ET~1	*Year (2012) * ETH=1 (Non-white)*
Year=2013 # ET~1	*Year (2013) * ETH=1 (Non-white)*
Year=2014 # ET~1	*Year (2014) * ETH=1 (Non-white)*
Year=2015 # ET~1	*Year (2015) * ETH=1 (Non-white)*
Year by Free School Meal eligibility	Base case (Year=2011 * FMS=0 - ineligible)
Year=2012 # FS~1	*Year (2012) * FSM=1 (Eligible)*
Year=2013 # FS~1	*Year (2013) * FSM=1 (Eligible)*
Year=2014 # FS~1	*Year (2014) * FSM=1 (Eligible)*
Year=2015 # FS~1	*Year (2015) * FSM=1 (Eligible)*
Year by Special Educational Needs	Base case (Year=2011 * SEN=0 – no support

Variable name	Description
status	needed)
Year=2012 # SE~1	*Year (2012) * SEN=1 (Receiving additional support)*
Year=2012 # SE~2	*Year (2012) * SEN=2 (Statement of SEN)*
Year=2013 # SE~1	*Year (2013) * SEN=1 (Receiving additional support)*
Year=2013 # SE~2	*Year (2013) * SEN=2 (Statement of SEN)*
Year=2014 # SE~1	*Year (2014) * SEN=1 (Receiving additional support)*
Year=2014 # SE~2	*Year (2014) * SEN=1 (Receiving additional support)*
Year=2015 # SE~1	*Year (2015) * SEN=2 (Statement of SEN)*
Year=2015 # SE~2	*Year (2015) * SEN=1 (Receiving additional support)*
Year by Language Medium taught in School	Base case(Year=2011 * LANG=0 – English medium)
Year=2012 # LA~1	*Year (2012) * LANG=1 (Welsh medium)*
Year=2012 # LA~2	*Year (2012) * LANG=2 (Other)*
Year=2012 # LA~3	*Year (2012) * LANG=3 (Language not specified)*
Year=2013 # LA~1	*Year (2013) * LANG=1 (Welsh medium)*
Year=2013 # LA~2	*Year (2013) * LANG=2 (Other)*
Year=2013 # LA~3	*Year (2013) * LANG=3 (Language not specified)*
Year=2014 # LA~1	*Year (2014) * LANG=1 (Welsh medium)*
Year=2014 # LA~2	*Year (2014) * LANG=2 (Other)*
Year=2014 # LA~3	*Year (2014) * LANG=3 (Language not specified)*
Year=2015 # LA~1	*Year (2015) * LANG=1 (Welsh medium)*
Year=2015 # LA~2	*Year (2015) * LANG=2 (Other)*
Year=2015 # LA~3	*Year (2015) * LANG=3 (Language not specified)*

Source: SQW

Table 0-30: Multi-level analysis of KS2 attainment in English, Welsh, Welsh as a 2nd Language, and Maths between 2011 and 2015

Key Stage 2	English		Welsh		Welsh as a 2nd Language		Maths	
	b	p	b	p	b	p	b	p
Pupil level								
FEM=0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
FEM=1	0.0881	0.00	0.1377	0.00	0.1170	0.00	-0.1125	0.00
ETH=0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
ETH=1	0.0054	0.70	-0.1630	0.00	0.0472	0.00	0.0376	0.01
FSM=0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
FSM=1	-0.2041	0.00	-0.2292	0.00	-0.1890	0.00	-0.1842	0.00
SEN=0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
SEN=1	-0.8146	0.00	-0.7377	0.00	-0.7140	0.00	-0.7426	0.00
SEN=2	-1.5974	0.00	-1.5086	0.00	-1.4847	0.00	-1.5564	0.00
LANG=0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
LANG=1	0.0124	0.31	0.4724	0.51	-0.2267	0.01	-0.0049	0.68
LANG=2	0.0139	0.51	0.3635	0.61	0.1747	0.00	0.0217	0.29
LANG=3	-1.8322	0.00	-1.7714	0.01	-1.6399	0.00	-2.0139	0.00
Year=2011	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012	0.0520	0.00	0.9867	0.27	0.2104	0.00	0.0353	0.00
Year=2013	0.1030	0.00	0.0697	0.93	0.3270	0.00	0.0754	0.00
Year=2014	0.1406	0.00	0.1289	0.71	0.4217	0.00	0.1082	0.00
Year=2015	0.1616	0.00	0.7337	0.03	0.4723	0.00	0.1386	0.00
Year=2011 # FE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # FE~1	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # FE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # FE~1	0.0068	0.49	-0.0112	0.60	0.0208	0.09	0.0190	0.06
Year=2013 # FE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2013 # FE~1	0.0088	0.38	-0.0148	0.49	0.0241	0.05	0.0233	0.02
Year=2014 # FE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2014 # FE~1	0.0066	0.50	-0.0109	0.61	0.0108	0.37	0.0382	0.00
Year=2015 # FE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2015 # FE~1	0.0080	0.41	-0.0293	0.17	0.0203	0.09	0.0395	0.00
Year=2011 # ET~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # ET~1	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # ET~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # ET~1	0.0207	0.29	-0.0200	0.71	-0.0534	0.02	-0.0097	0.62
Year=2013 # ET~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2013 # ET~1	-0.0086	0.66	0.0939	0.10	-0.0933	0.00	0.0013	0.95
Year=2014 # ET~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2014 # ET~1	0.0177	0.35	0.1734	0.00	-0.0526	0.02	0.0047	0.81
Year=2015 # ET~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2015 # ET~1	0.0391	0.04	0.1236	0.03	-0.0711	0.00	0.0316	0.10
Year=2011 # FS~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # FS~1	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # FS~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # FS~1	-0.0088	0.48	0.0269	0.39	-0.0198	0.19	-0.0013	0.92
Year=2013 # FS~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2013 # FS~1	0.0210	0.09	-0.0017	0.96	0.0164	0.27	0.0055	0.66
Year=2014 # FS~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2014 # FS~1	-0.0171	0.17	-0.0642	0.05	-0.0054	0.72	-0.0154	0.22
Year=2015 # FS~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2015 # FS~1	0.0332	0.01	-0.0081	0.80	0.0155	0.30	0.0221	0.08
Year=2011 # SE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # SE~1	0.0000	.	0.0000	.	0.0000	.	0.0000	.

Key Stage 2	English		Welsh		Welsh as a 2nd Language		Maths	
	b	p	b	p	b	p	b	p
Year=2011 # SE~2	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # SE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # SE~1	0.0124	0.29	0.0066	0.79	-0.0169	0.24	0.0267	0.02
Year=2012 # SE~2	-0.0050	0.87	0.1475	0.07	-0.1291	0.00	0.0183	0.56
Year=2013 # SE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2013 # SE~1	0.0471	0.00	-0.0094	0.71	-0.0040	0.78	0.0303	0.01
Year=2013 # SE~2	0.0136	0.67	0.1066	0.20	-0.1496	0.00	-0.0028	0.93
Year=2014 # SE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2014 # SE~1	0.0647	0.00	0.0001	1.00	0.0049	0.73	0.0345	0.00
Year=2014 # SE~2	0.0089	0.78	0.1239	0.11	-0.1125	0.00	-0.0397	0.21
Year=2015 # SE~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2015 # SE~1	0.0657	0.00	0.0172	0.48	0.0145	0.31	0.0352	0.00
Year=2015 # SE~2	-0.0286	0.37	-0.1454	0.08	-0.1535	0.00	-0.0478	0.14
Year=2011 # LA~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # LA~1	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # LA~2	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2011 # LA~3	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # LA~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2012 # LA~1	-0.0294	0.02	-0.9546	0.29	0.2283	0.03	-0.0113	0.37
Year=2012 # LA~2	-0.0109	0.60	-0.9336	0.30	-0.0974	0.00	-0.0615	0.00
Year=2012 # LA~3	-0.0377	0.58	-0.7318	0.41	0.0255	0.75	0.0000	1.00
Year=2013 # LA~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2013 # LA~1	-0.0494	0.00	0.0265	0.97	0.0332	0.67	-0.0228	0.07
Year=2013 # LA~2	-0.0618	0.00	0.0788	0.92	-0.0780	0.00	-0.0652	0.00
Year=2013 # LA~3	-0.2366	0.00		0.84	-0.3290	0.00	-0.0918	0.18
Year=2014 # LA~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2014 # LA~1	-0.0514	0.00	0.0047	0.99	0.2059	0.01	-0.0223	0.07
Year=2014 # LA~2	-0.0240	0.25	0.0685	0.85	-0.0707	0.01	-0.0309	0.14
Year=2014 # LA~3	-0.0774	0.26	0.0000	.	-0.2563	0.00	0.0545	0.43
Year=2015 # LA~0	0.0000	.	0.0000	.	0.0000	.	0.0000	.
Year=2015 # LA~1	-0.0179	0.15	-0.5246	0.12	0.3232	0.00	0.0107	0.39
Year=2015 # LA~2	0.0044	0.83	-0.4495	0.19	0.0206	0.44	0.0235	0.25
Year=2015 # LA~3	-0.1231	0.07	0.0000	.	-0.2729	0.00	-0.0230	0.74
fsm_school	-0.4743	0.00	-0.8802	0.00	-0.3957	0.00	-0.4198	0.00
size	0.0000	0.94	0.0001	0.11	-0.0001	0.24	0.0000	0.78
Constant	4.4471	0.00	3.8531	0.00	3.7270	0.00	4.5344	0.00
Observations	150,915		31,137		115,176		150,920	
Groups	1,289		427		937		1,289	
AIC	272,374		55,853		227,356		273,358	

Note: School-level random effects parameters include FSM eligibility and School size; Coefficients in grey refer to base/reference cases (year=2011, FEM=0 (male), ETH=0 (white), FSM=0 (FSM ineligible), SEN=0 (No SENs), LANG=0 (English medium)

Figure 0-1: Multi-level analysis of KS2 attainment in English

```
Mixed-effects REML regression                   Number of obs     =    150,915
Group variable: school                          Number of groups  =      1,289

                                                Obs per group:
                                                              min =          2
                                                              avg =      117.1
                                                              max =        436

                                                Wald chi2(46)     =   82593.83
Log restricted-likelihood =  -136135.9          Prob > chi2       =     0.0000
```

engta_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.0880949	.0070104	12.57	0.000	.0743549	.101835
1.ETH	.0054179	.014142	0.38	0.702	-.0222998	.0331357
1.FSM	-.2040519	.0089115	-22.90	0.000	-.2215182	-.1865856
SEN						
1	-.8145615	.0083554	-97.49	0.000	-.8309379	-.7981852
2	-1.597406	.0219459	-72.79	0.000	-1.640419	-1.554392
LANG						
1	.0123664	.0122047	1.01	0.311	-.0115543	.0362871
2	.0139202	.0209716	0.66	0.507	-.0271835	.0550239
3	-1.83224	.0613969	-29.84	0.000	-1.952576	-1.711905
year						
2012	.0520418	.0086305	6.03	0.000	.0351263	.0689572
2013	.102958	.0086519	11.90	0.000	.0860006	.1199155
2014	.140555	.008586	16.37	0.000	.1237267	.1573833
2015	.1615698	.0085195	18.96	0.000	.1448719	.1782676
year#FEM						
2012 1	.006774	.0098935	0.68	0.494	-.0126169	.0261649
2013 1	.0087541	.009892	0.88	0.376	-.0106338	.028142
2014 1	.0066329	.0098061	0.68	0.499	-.0125867	.0258526
2015 1	.007978	.0097515	0.82	0.413	-.0111347	.0270906
year#ETH						
2012 1	.0207494	.0194447	1.07	0.286	-.0173614	.0588603
2013 1	-.0086155	.0195269	-0.44	0.659	-.0468875	.0296565
2014 1	.0177325	.0190764	0.93	0.353	-.0196567	.0551216
2015 1	.0390694	.0190521	2.05	0.040	.001728	.0764108
year#FSM						
2012 1	-.0088185	.012527	-0.70	0.481	-.0333709	.0157339
2013 1	.0210258	.0125184	1.68	0.093	-.0035098	.0455613
2014 1	-.017143	.0124824	-1.37	0.170	-.0416081	.007322
2015 1	.0332133	.0124883	2.66	0.008	.0087367	.05769
year#SEN						
2012 1	.0124052	.0116826	1.06	0.288	-.0104923	.0353026
2012 2	-.0050068	.0316687	-0.16	0.874	-.0670763	.0570627
2013 1	.0470759	.0116798	4.03	0.000	.024184	.0699678
2013 2	.0136386	.031874	0.43	0.669	-.0488334	.0761105
2014 1	.0647185	.0115922	5.58	0.000	.0419981	.0874389
2014 2	.0089229	.0314849	0.28	0.777	-.0527863	.0706321
2015 1	.0656518	.011563	5.68	0.000	.0429888	.0883149
2015 2	-.0285513	.0318416	-0.90	0.370	-.0909598	.0338572
year#LANG						
2012 1	-.0294193	.0124807	-2.36	0.018	-.053881	-.0049576
2012 2	-.0109271	.0207881	-0.53	0.599	-.0516711	.0298169
2012 3	-.0376524	.0682753	-0.55	0.581	-.1714695	.0961647
2013 1	-.0493737	.012535	-3.94	0.000	-.0739419	-.0248055
2013 2	-.0617622	.02092	-2.95	0.003	-.1027646	-.0207598
2013 3	-.2365726	.0689509	-3.43	0.001	-.371714	-.1014312
2014 1	-.0513939	.0124452	-4.13	0.000	-.075786	-.0270019
2014 2	-.0240171	.0206792	-1.16	0.245	-.0645475	.0165134
2014 3	-.0774389	.0689554	-1.12	0.261	-.2125891	.0577112
2015 1	-.0179063	.0123822	-1.45	0.148	-.0421749	.0063623
2015 2	.0044163	.020511	0.22	0.830	-.0357845	.0446172
2015 3	-.1230629	.0686308	-1.79	0.073	-.2575768	.0114511
fsm_school	-.4743419	.0382423	-12.40	0.000	-.5492954	-.3993885
size	2.13e-06	.0000283	0.08	0.940	-.0000533	.0000576
_cons	4.447135	.0119306	372.75	0.000	4.423752	4.470519

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.2006505	.0214654	.1626971	.2474576
var(size)	8.22e-16	6.64e-14	1.39e-84	4.88e+53
var(_cons)	.0093104	.0007893	.0078851	.0109933
var(Residual)	.3496721	.0012789	.3471745	.3521877

```
LR test vs. linear model: chi2(3) = 4496.56                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-2: Multi-level analysis of KS2 attainment in Welsh

```
Mixed-effects REML regression                   Number of obs     =     31,137
Group variable: school                          Number of groups  =        427

                                                Obs per group:
                                                              min =          1
                                                              avg =       72.9
                                                              max =        281

                                                Wald chi2(44)     =   14500.60
Log restricted-likelihood = -27877.726          Prob > chi2       =     0.0000
```

cymta_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.137689	.0152568	9.02	0.000	.1077862	.1675917
1.ETH	-.1629767	.0398351	-4.09	0.000	-.241052	-.0849013
1.FSM	-.229198	.0224077	-10.23	0.000	-.2731162	-.1852798
SEN						
1	-.7377003	.0178084	-41.42	0.000	-.7726042	-.7027964
2	-1.508578	.0524347	-28.77	0.000	-1.611348	-1.405808
LANG						
1	.4723649	.7208859	0.66	0.512	-.9405456	1.885275
2	.3635143	.7219817	0.50	0.615	-1.051544	1.778573
3	-1.77136	.6927658	-2.56	0.011	-3.129156	-.4135639
year						
2012	.9866793	.8953073	1.10	0.270	-.7680908	2.741449
2013	.0696558	.7713654	0.09	0.928	-1.442193	1.581504
2014	.1288568	.3505382	0.37	0.713	-.5581856	.8158991
2015	.7336644	.3375508	2.17	0.030	.0720771	1.395252
year#FEM						
2012 1	-.0112103	.021444	-0.52	0.601	-.0532397	.0308191
2013 1	-.0148253	.02152	-0.69	0.491	-.0570037	.0273531
2014 1	-.0109347	.0213615	-0.51	0.609	-.0528025	.030933
2015 1	-.0293451	.0212018	-1.38	0.166	-.0708999	.0122097
year#ETH						
2012 1	-.0200051	.0536823	-0.37	0.709	-.1252205	.0852104
2013 1	.0938608	.0577921	1.62	0.104	-.0194096	.2071313
2014 1	.1733898	.0586375	2.96	0.003	.0584626	.2883171
2015 1	.1236225	.0562922	2.20	0.028	.0132919	.2339532
year#FSM						
2012 1	.0269211	.0315336	0.85	0.393	-.0348836	.0887259
2013 1	-.0016919	.0323078	-0.05	0.958	-.065014	.0616302
2014 1	-.0642407	.0328113	-1.96	0.050	-.1285496	.0000683
2015 1	-.0081215	.0325182	-0.25	0.803	-.071856	.055613
year#SEN						
2012 1	.0066319	.0246998	0.27	0.788	-.0417789	.0550428
2012 2	.1474585	.0810187	1.82	0.069	-.0113353	.3062523
2013 1	-.0094355	.0249731	-0.38	0.706	-.058382	.0395109
2013 2	.1065717	.0835195	1.28	0.202	-.0571235	.2702668
2014 1	.0001439	.0247769	0.01	0.995	-.048418	.0487057
2014 2	.1239057	.0767743	1.61	0.107	-.0265692	.2743805
2015 1	.0171544	.0245113	0.70	0.484	-.0308868	.0651956
2015 2	-.1453708	.0840919	-1.73	0.084	-.3101878	.0194462
year#LANG						
2011 0	0	(empty)				
2012 1	-.9545816	.8952298	-1.07	0.286	-2.7092	.8000366
2012 2	-.9336138	.8960692	-1.04	0.297	-2.689877	.8226495
2012 3	-.7317734	.8799021	-0.83	0.406	-2.45635	.992803
2013 1	.0264725	.7712768	0.03	0.973	-1.485202	1.538147
2013 2	.0787818	.7722677	0.10	0.919	-1.434835	1.592399
2013 3	.1587592	.7791477	0.20	0.839	-1.368342	1.685861
2014 1	.0047244	.3500977	0.01	0.989	-.6814543	.6909032
2014 2	.0685138	.3522268	0.19	0.846	-.621838	.7588656
2014 3	0	(omitted)				
2015 0	0	(empty)				
2015 1	-.5246101	.3371943	-1.56	0.120	-1.185499	.1362786
2015 2	-.4495142	.3393549	-1.32	0.185	-1.114638	.2156093
2015 3	0	(omitted)				
fsm_school	-.8801748	.1428298	-6.16	0.000	-1.160116	-.6002335
size	.0001299	.0000808	1.61	0.108	-.0000285	.0002882
_cons	3.853081	.7216404	5.34	0.000	2.438692	5.26747

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.8231313	.2559681	.4474784	1.51414
var(size)	1.09e-08	6.11e-08	1.79e-13	.0006583
var(_cons)	.0257227	.0047757	.0178765	.0370128
var(Residual)	.3392644	.0027401	.3339361	.3446777

```
LR test vs. linear model: chi2(3) = 2066.79                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-3: Multi-level analysis of KS2 attainment in Welsh as a 2nd Language

```
Mixed-effects REML regression                   Number of obs     =    115,176
Group variable: school                          Number of groups  =        937

                                                Obs per group:
                                                              min =          1
                                                              avg =      122.9
                                                              max =        436

                                                Wald chi2(46)     =   54202.80
Log restricted-likelihood = -113626.87          Prob > chi2       =     0.0000
```

wel_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.1169873	.0086315	13.55	0.000	.1000698	.1339048
1.ETH	.0471776	.0165398	2.85	0.004	.0147603	.0795949
1.FSM	-.1890164	.0106311	-17.78	0.000	-.209853	-.1681798
SEN						
1	-.7140265	.0103338	-69.10	0.000	-.7342803	-.6937727
2	-1.484727	.0273239	-54.34	0.000	-1.538281	-1.431173
LANG						
1	-.2266703	.0929719	-2.44	0.015	-.4088918	-.0444487
2	.1747474	.037873	4.61	0.000	.1005177	.2489772
3	-1.639851	.083983	-19.53	0.000	-1.804454	-1.475247
year						
2012	.2103673	.010096	20.84	0.000	.1905796	.2301551
2013	.327037	.010227	31.98	0.000	.3069926	.3470815
2014	.4216776	.0101334	41.61	0.000	.4018164	.4415387
2015	.4723216	.010004	47.21	0.000	.452714	.4919291
year#FEM						
2012 1	.0207888	.0121797	1.71	0.088	-.003083	.0446605
2013 1	.0241038	.0122781	1.96	0.050	.0000391	.0481685
2014 1	.010843	.012176	0.89	0.373	-.0130215	.0347074
2015 1	.0202941	.0120424	1.69	0.092	-.0033086	.0438968
year#ETH						
2012 1	-.0534125	.0228532	-2.34	0.019	-.0982039	-.0086211
2013 1	-.0933076	.0228036	-4.09	0.000	-.1380018	-.0486134
2014 1	-.052596	.0224858	-2.34	0.019	-.0966674	-.0085247
2015 1	-.0710938	.0222896	-3.19	0.001	-.1147805	-.0274071
year#FSM						
2012 1	-.0197952	.0149646	-1.32	0.186	-.0491254	.0095349
2013 1	.0164499	.0150158	1.10	0.273	-.0129805	.0458803
2014 1	-.0053759	.0149654	-0.36	0.719	-.0347075	.0239557
2015 1	.015477	.0149045	1.04	0.299	-.0137353	.0446893
year#SEN						
2012 1	-.0168839	.0144707	-1.17	0.243	-.045246	.0114781
2012 2	-.1290926	.0390561	-3.31	0.001	-.2056412	-.052544
2013 1	-.0040243	.0145453	-0.28	0.782	-.0325327	.024484
2013 2	-.1496297	.0393781	-3.80	0.000	-.2268093	-.0724502
2014 1	.0048964	.0144552	0.34	0.735	-.0234354	.0332281
2014 2	-.1125072	.0393935	-2.86	0.004	-.189717	-.0352974
2015 1	.0145367	.0143768	1.01	0.312	-.0136413	.0427147
2015 2	-.1535392	.0394031	-3.90	0.000	-.2307678	-.0763105
year#LANG						
2012 1	.2283433	.1051638	2.17	0.030	.0222261	.4344606
2012 2	-.0974077	.0265599	-3.67	0.000	-.1494641	-.0453513
2012 3	.0255245	.0812567	0.31	0.753	-.1337357	.1847846
2013 1	.0331677	.0781299	0.42	0.671	-.119964	.1862994
2013 2	-.078011	.0267828	-2.91	0.004	-.1305043	-.0255176
2013 3	-.3289909	.0850949	-3.87	0.000	-.4957739	-.162208
2014 1	.2058739	.081601	2.52	0.012	.0459388	.3658089
2014 2	-.0707241	.0267297	-2.65	0.008	-.1231133	-.0183348
2014 3	-.2563288	.0839682	-3.05	0.002	-.4209034	-.0917542
2015 1	.3231784	.0844821	3.83	0.000	.1575966	.4887602
2015 2	.020613	.0264263	0.78	0.435	-.0311817	.0724076
2015 3	-.2728511	.0826572	-3.30	0.001	-.4348563	-.1108459
fsm_school	-.3956947	.0699626	-5.66	0.000	-.5328189	-.2585705
size	-.0000784	.000066	-1.19	0.235	-.0002078	.0000511
_cons	3.726986	.0237123	157.18	0.000	3.680511	3.773462

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.2060501	.0592757	.1172473	.3621122
var(size)	4.47e-15	7.37e-15	1.76e-16	1.13e-13
var(_cons)	.061656	.0044781	.0534751	.0710885
var(Residual)	.4103791	.0017191	.4070235	.4137624

```
LR test vs. linear model: chi2(3) = 14378.14                  Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-4: Multi-level analysis of KS2 attainment in Maths

```
Mixed-effects REML regression                   Number of obs     =    150,920
Group variable: school                          Number of groups  =      1,289

                                                Obs per group:
                                                              min =          2
                                                              avg =      117.1
                                                              max =        436

                                                Wald chi2(46)     =   69640.46
Log restricted-likelihood = -136628.04          Prob > chi2       =     0.0000
```

math_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	-.1125347	.0070341	-16.00	0.000	-.1263212	-.0987481
1.ETH	.0375678	.0141856	2.65	0.008	.0097645	.0653711
1.FSM	-.1841991	.008942	-20.60	0.000	-.2017251	-.1666731
SEN						
1	-.7425521	.0083833	-88.57	0.000	-.7589832	-.7261211
2	-1.556412	.0220071	-70.72	0.000	-1.599545	-1.513279
LANG						
1	-.0048984	.011971	-0.41	0.682	-.0283612	.0185644
2	.0216743	.0205481	1.05	0.292	-.0185992	.0619478
3	-2.013863	.0613698	-32.82	0.000	-2.134146	-1.893581
year						
2012	.035274	.0086599	4.07	0.000	.0183008	.0522472
2013	.0753526	.0086814	8.68	0.000	.0583374	.0923678
2014	.1082374	.0086152	12.56	0.000	.0913519	.1251228
2015	.1386245	.008548	16.22	0.000	.1218708	.1553782
year#FEM						
2012 1	.0190291	.0099272	1.92	0.055	-.0004279	.0384861
2013 1	.0233125	.0099254	2.35	0.019	.003859	.042766
2014 1	.0381523	.0098396	3.88	0.000	.018867	.0574376
2015 1	.0395117	.0097847	4.04	0.000	.0203341	.0586893
year#ETH						
2012 1	-.0097442	.0195093	-0.50	0.617	-.0479817	.0284933
2013 1	.0012582	.0195918	0.06	0.949	-.037141	.0396573
2014 1	.0046724	.0191416	0.24	0.807	-.0328444	.0421892
2015 1	.0315798	.0191151	1.65	0.099	-.0058851	.0690448
year#FSM						
2012 1	-.0013244	.0125697	-0.11	0.916	-.0259606	.0233117
2013 1	.005516	.0125611	0.44	0.661	-.0191033	.0301352
2014 1	-.0154064	.0125251	-1.23	0.219	-.0399551	.0091424
2015 1	.0221464	.0125312	1.77	0.077	-.0024143	.0467072
year#SEN						
2012 1	.0266631	.0117222	2.27	0.023	.003688	.0496382
2012 2	.0182938	.0317795	0.58	0.565	-.0439929	.0805805
2013 1	.0302623	.0117194	2.58	0.010	.0072928	.0532319
2013 2	-.0028424	.0319633	-0.09	0.929	-.0654893	.0598044
2014 1	.0344805	.0116319	2.96	0.003	.0116825	.0572785
2014 2	-.0397425	.0315738	-1.26	0.208	-.1016261	.022141
2015 1	.0351758	.0116021	3.03	0.002	.0124361	.0579155
2015 2	-.0477505	.0319521	-1.49	0.135	-.1103753	.0148744
year#LANG						
2012 1	-.0113023	.0125224	-0.90	0.367	-.0358457	.0132411
2012 2	-.0615402	.0208594	-2.95	0.003	-.1024239	-.0206565
2012 3	-.0000472	.0682931	-0.00	0.999	-.1338993	.1338048
2013 1	-.0228416	.0125758	-1.82	0.069	-.0474897	.0018065
2013 2	-.0652417	.0209911	-3.11	0.002	-.1063835	-.0241
2013 3	-.0917931	.0691789	-1.33	0.185	-.2273813	.0437951
2014 1	-.0222539	.0124861	-1.78	0.075	-.0467262	.0022185
2014 2	-.0308807	.0207498	-1.49	0.137	-.0715495	.0097882
2014 3	.0544878	.0692674	0.79	0.431	-.0812739	.1902495
2015 1	.010705	.0124224	0.86	0.389	-.0136424	.0350524
2015 2	.0235257	.0205772	1.14	0.253	-.0168049	.0638562
2015 3	-.0229886	.0687422	-0.33	0.738	-.1577209	.1117436
fsm_school	-.4198468	.0375292	-11.19	0.000	-.4934028	-.3462909
size	7.46e-06	.0000272	0.27	0.784	-.0000459	.0000608
_cons	4.534433	.0116194	390.25	0.000	4.51166	4.557207

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.2074724	.021813	.1688371	.2549487
var(size)	3.53e-15	4.64e-15	2.70e-16	4.63e-14
var(_cons)	.008027	.0007394	.006701	.0096153
var(Residual)	.3521194	.0012881	.3496039	.3546531

```
LR test vs. linear model: chi2(3) = 4251.29                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-5: Multi-level analysis of KS3 attainment in English

```
Mixed-effects REML regression                   Number of obs     =    161,994
Group variable: school                          Number of groups  =        257

                                                Obs per group:
                                                              min =          5
                                                              avg =      630.3
                                                              max =      1,545

                                                Wald chi2(46)     =   69565.62
Log restricted-likelihood =  -199617.8          Prob > chi2       =     0.0000
```

engta_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.260251	.0091962	28.30	0.000	.2422268	.2782751
1.ETH	.0508225	.0201497	2.52	0.012	.0113299	.0903151
1.FSM	-.3812388	.0120315	-31.69	0.000	-.4048201	-.3576575
SEN						
1	-1.006344	.0119009	-84.56	0.000	-1.02967	-.983019
2	-1.512699	.0271137	-55.79	0.000	-1.565841	-1.459558
LANG						
1	-.0856813	.0570609	-1.50	0.133	-.1975185	.026156
2	-.0345622	.047701	-0.72	0.469	-.1280545	.05893
3	-1.755498	.106339	-16.51	0.000	-1.963919	-1.547078
year						
2012	.0843548	.0110466	7.64	0.000	.0627039	.1060056
2013	.2072848	.0111232	18.64	0.000	.1854838	.2290859
2014	.3410296	.0112345	30.36	0.000	.3190104	.3630487
2015	.4276647	.0113023	37.84	0.000	.4055127	.4498168
year#FEM						
2012 1	.0173737	.0130139	1.34	0.182	-.008133	.0428804
2013 1	.0178585	.0130488	1.37	0.171	-.0077167	.0434336
2014 1	-.0035202	.0130952	-0.27	0.788	-.0291863	.022146
2015 1	.0191515	.0131625	1.46	0.146	-.0066465	.0449496
year#ETH						
2012 1	.0061711	.0278483	0.22	0.825	-.0484106	.0607528
2013 1	.0031533	.0278832	0.11	0.910	-.0514967	.0578033
2014 1	-.0321494	.0274567	-1.17	0.242	-.0859636	.0216648
2015 1	-.0095512	.0276566	-0.35	0.730	-.0637571	.0446546
year#FSM						
2012 1	-.0025182	.017164	-0.15	0.883	-.036159	.0311227
2013 1	-.0091247	.0171924	-0.53	0.596	-.0428211	.0245717
2014 1	.0407075	.0172537	2.36	0.018	.0068909	.074524
2015 1	.0570111	.0173409	3.29	0.001	.0230236	.0909986
year#SEN						
2012 1	.0300675	.0167393	1.80	0.072	-.0027408	.0628759
2012 2	-.1138018	.0382865	-2.97	0.003	-.188842	-.0387617
2013 1	.0399168	.0166237	2.40	0.016	.0073349	.0724988
2013 2	-.1128955	.0386525	-2.92	0.003	-.1886531	-.0371379
2014 1	.0955572	.0164597	5.81	0.000	.0632968	.1278177
2014 2	-.2045168	.038718	-5.28	0.000	-.2804027	-.1286308
2015 1	.0991442	.0164669	6.02	0.000	.0668697	.1314188
2015 2	-.1684978	.0396284	-4.25	0.000	-.2461681	-.0908276
year#LANG						
2012 1	-.0210001	.0236118	-0.89	0.374	-.0672784	.0252783
2012 2	.0408752	.0186189	2.20	0.028	.0043828	.0773675
2012 3	-.1131324	.0580123	-1.95	0.051	-.2268344	.0005695
2013 1	.0088406	.0237424	0.37	0.710	-.0376936	.0553748
2013 2	.0338149	.0186118	1.82	0.069	-.0026635	.0702933
2013 3	-.0195211	.0583071	-0.33	0.738	-.1338009	.0947586
2014 1	-.0026138	.023855	-0.11	0.913	-.0493687	.044141
2014 2	.0386025	.0187056	2.06	0.039	.0019402	.0752648
2014 3	-.1048478	.0592335	-1.77	0.077	-.2209434	.0112478
2015 1	-.0136142	.0240333	-0.57	0.571	-.0607187	.0334903
2015 2	-.0313191	.0188175	-1.66	0.096	-.0682007	.0055624
2015 3	-.1902161	.0614164	-3.10	0.002	-.3105902	-.0698421
fsm_school	-2.271155	.2251861	-10.09	0.000	-2.712512	-1.829798
size	-2.33e-06	.0000485	-0.05	0.962	-.0000974	.0000928
_cons	5.735534	.071034	80.74	0.000	5.59631	5.874759

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	1.421893	.2386217	1.023337	1.975675
var(size)	3.75e-21	1.21e-20	6.62e-24	2.12e-18
var(_cons)	.0303113	.0063527	.0201006	.0457091
var(Residual)	.6828858	.0024037	.6781909	.6876132

```
LR test vs. linear model: chi2(3) = 8002.67                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-6: Multi-level analysis of KS3 attainment in Welsh

```
Mixed-effects REML regression                   Number of obs     =     27,403
Group variable: school                          Number of groups  =         80

                                                Obs per group:
                                                              min =          1
                                                              avg =      342.5
                                                              max =      1,134

                                                Wald chi2(46)     =   11695.77
Log restricted-likelihood = -32275.521          Prob > chi2       =     0.0000
```

cymta_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.2860906	.0214809	13.32	0.000	.2439888	.3281925
1.ETH	.0352216	.0567528	0.62	0.535	-.0760118	.146455
1.FSM	-.4813558	.035056	-13.73	0.000	-.5500643	-.4126473
SEN						
1	-.9681006	.0287524	-33.67	0.000	-1.024454	-.911747
2	-1.497641	.075942	-19.72	0.000	-1.646485	-1.348798
LANG						
1	.0397742	.1750757	0.23	0.820	-.3033677	.3829162
2	.0804265	.1729891	0.46	0.642	-.2586259	.4194788
3	-.6861219	.2689963	-2.55	0.011	-1.213345	-.1588988
year						
2012	.0895403	.1495643	0.60	0.549	-.2036003	.3826809
2013	.1521101	.1386397	1.10	0.273	-.1196188	.423839
2014	-.0247445	.1422965	-0.17	0.862	-.3036405	.2541514
2015	.0297108	.1411788	0.21	0.833	-.2469945	.3064161
year#FEM						
2012 1	.0206809	.0304599	0.68	0.497	-.0390193	.0803811
2013 1	.0590874	.0302747	1.95	0.051	-.00025	.1184248
2014 1	.0248372	.0301483	0.82	0.410	-.0342524	.0839268
2015 1	.0355001	.0300505	1.18	0.237	-.0233977	.0943979
year#ETH						
2012 1	-.0896799	.0859957	-1.04	0.297	-.2582284	.0788686
2013 1	-.0463549	.0881182	-0.53	0.599	-.2190635	.1263537
2014 1	-.1369142	.0919936	-1.49	0.137	-.3172184	.04339
2015 1	-.0740308	.0879896	-0.84	0.400	-.2464873	.0984256
year#FSM						
2012 1	-.0097868	.0513014	-0.19	0.849	-.1103357	.0907621
2013 1	.0294897	.0501339	0.59	0.556	-.0687709	.1277504
2014 1	.0148683	.0506684	0.29	0.769	-.0844399	.1141765
2015 1	.1108407	.0497632	2.23	0.026	.0133066	.2083748
year#SEN						
2012 1	.0188833	.0404249	0.47	0.640	-.0603481	.0981147
2012 2	-.1564512	.1086426	-1.44	0.150	-.3693869	.0564844
2013 1	.0566507	.0402475	1.41	0.159	-.022233	.1355343
2013 2	-.0350387	.1078701	-0.32	0.745	-.2464601	.1763828
2014 1	.070422	.0389125	1.81	0.070	-.0058451	.146689
2014 2	-.4100392	.1095112	-3.74	0.000	-.6246773	-.1954011
2015 1	.0476567	.038461	1.24	0.215	-.0277255	.123039
2015 2	.0363737	.1144134	0.32	0.751	-.1878725	.2606199
year#LANG						
2012 1	-.0312546	.149473	-0.21	0.834	-.3242162	.261707
2012 2	-.0065746	.1495927	-0.04	0.965	-.2997709	.2866217
2012 3	.0359462	.1753434	0.21	0.838	-.3077206	.379613
2013 1	.0371228	.1386343	0.27	0.789	-.2345954	.308841
2013 2	-.0219799	.1387571	-0.16	0.874	-.2939388	.249979
2013 3	.2285556	.1657011	1.38	0.168	-.0962125	.5533238
2014 1	.3979379	.1425841	2.79	0.005	.1184781	.6773976
2014 2	.328236	.1426697	2.30	0.021	.0486086	.6078634
2014 3	.564427	.1698564	3.32	0.001	.2315145	.8973394
2015 1	.4350839	.1410652	3.08	0.002	.1586011	.7115667
2015 2	.3334311	.1411558	2.36	0.018	.0567709	.6100914
2015 3	.5426636	.1692091	3.21	0.001	.2110199	.8743072
fsm_school	-3.284053	.782038	-4.20	0.000	-4.81682	-1.751287
size	-.0001845	.000108	-1.71	0.088	-.0003963	.0000273
_cons	5.749534	.2175221	26.43	0.000	5.323198	6.17587

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	6.277514	1.737899	3.648687	10.80037
var(size)	3.20e-20	1.58e-19	2.01e-24	5.10e-16
var(_cons)	.0064806	.0111236	.0002242	.1873499
var(Residual)	.6078077	.0052588	.5975875	.6182026

```
LR test vs. linear model: chi2(3) = 1259.96                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-7: Multi-level analysis of KS3 attainment in Welsh as a 2nd Language

```
Mixed-effects REML regression                   Number of obs     =    132,629
Group variable: school                          Number of groups  =        230

                                                Obs per group:
                                                              min =          1
                                                              avg =      576.6
                                                              max =      1,545

                                                Wald chi2(46)     =   51127.51
Log restricted-likelihood = -167446.58          Prob > chi2       =     0.0000
```

wel_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.3697542	.0104371	35.43	0.000	.3492979	.3902105
1.ETH	.0692653	.0222518	3.11	0.002	.0256526	.1128781
1.FSM	-.3867796	.0132961	-29.09	0.000	-.4128396	-.3607196
SEN						
1	-.8699352	.0134733	-64.57	0.000	-.8963423	-.8435281
2	-1.33041	.03585	-37.11	0.000	-1.400675	-1.260146
LANG						
1	.0670149	.2250788	0.30	0.766	-.3741315	.5081614
2	.0398767	.0586785	0.68	0.497	-.0751311	.1548845
3	-2.508236	.1258141	-19.94	0.000	-2.754827	-2.261645
year						
2012	.1132925	.0119884	9.45	0.000	.0897956	.1367894
2013	.2753943	.0120887	22.78	0.000	.2517009	.2990877
2014	.4306743	.0122135	35.26	0.000	.4067363	.4546123
2015	.5558691	.0123066	45.17	0.000	.5317487	.5799896
year#FEM						
2012 1	.0056639	.0147559	0.38	0.701	-.0232572	.0345849
2013 1	-.0057363	.0148196	-0.39	0.699	-.0347821	.0233096
2014 1	-.0351844	.0148914	-2.36	0.018	-.064371	-.0059977
2015 1	-.0105914	.0150085	-0.71	0.480	-.0400075	.0188246
year#ETH						
2012 1	-.0343632	.0304258	-1.13	0.259	-.0939966	.0252702
2013 1	.0203338	.0304259	0.67	0.504	-.0392998	.0799674
2014 1	.0303644	.0298535	1.02	0.309	-.0281474	.0888762
2015 1	-.0058321	.0301805	-0.19	0.847	-.0649849	.0533206
year#FSM						
2012 1	-.0087045	.018899	-0.46	0.645	-.0457458	.0283367
2013 1	-.027176	.018993	-1.43	0.152	-.0644017	.0100496
2014 1	.0474539	.0190354	2.49	0.013	.0101453	.0847625
2015 1	.0436789	.0192106	2.27	0.023	.0060267	.081331
year#SEN						
2012 1	-.0507603	.0189181	-2.68	0.007	-.087839	-.0136816
2012 2	-.1682089	.0506691	-3.32	0.001	-.2675185	-.0688992
2013 1	.0122171	.0187808	0.65	0.515	-.0245925	.0490268
2013 2	-.0842938	.0517767	-1.63	0.104	-.1857742	.0171867
2014 1	.0590292	.0186856	3.16	0.002	.022406	.0956524
2014 2	-.1353404	.0517843	-2.61	0.009	-.2368358	-.0338449
2015 1	.0547035	.0187432	2.92	0.004	.0179675	.0914396
2015 2	-.0660109	.0531648	-1.24	0.214	-.1702121	.0381902
year#LANG						
2012 1	.7470869	.2795798	2.67	0.008	.1991207	1.295053
2012 2	-.0252888	.0268978	-0.94	0.347	-.0780075	.0274299
2012 3	.0293065	.0802956	0.36	0.715	-.1280699	.1866829
2013 1	.301716	.2939985	1.03	0.305	-.2745105	.8779425
2013 2	-.0315106	.0269833	-1.17	0.243	-.084397	.0213757
2013 3	-.1357596	.0824066	-1.65	0.099	-.2972736	.0257545
2014 1	-.4238517	.275699	-1.54	0.124	-.9642118	.1165083
2014 2	-.0529581	.027372	-1.93	0.053	-.1066064	.0006901
2014 3	-.2737592	.0822988	-3.33	0.001	-.4350618	-.1124566
2015 1	.3867385	.2641179	1.46	0.143	-.130923	.9044001
2015 2	-.0556634	.0278117	-2.00	0.045	-.1101734	-.0011533
2015 3	-.5423342	.087173	-6.22	0.000	-.7131902	-.3714782
fsm_school	-1.195696	.2519252	-4.75	0.000	-1.68946	-.7019315
size	.000087	.0000571	1.52	0.127	-.0000248	.0001989
_cons	5.081647	.0833878	60.94	0.000	4.918209	5.245084

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	1.112949	.2366717	.7336093	1.68844
var(size)	6.73e-20	2.23e-19	1.02e-22	4.44e-17
var(_cons)	.0449979	.0095996	.0296211	.0683571
var(Residual)	.7252836	.0028218	.719774	.7308354

```
LR test vs. linear model: chi2(3) = 10122.63                  Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-8: Multi-level analysis of KS3 attainment in Maths

```
Mixed-effects REML regression                   Number of obs     =    162,004
Group variable: school                          Number of groups  =        257

                                                Obs per group:
                                                              min =          5
                                                              avg =      630.4
                                                              max =      1,545

                                                Wald chi2(46)     =   57465.17
Log restricted-likelihood = -220540.64          Prob > chi2       =     0.0000
```

math_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	-.0650511	.0104642	-6.22	0.000	-.0855606	-.0445416
1.ETH	.1397217	.0229233	6.10	0.000	.0947929	.1846505
1.FSM	-.4730602	.0136927	-34.55	0.000	-.4998975	-.4462229
SEN						
1	-1.139192	.013541	-84.13	0.000	-1.165732	-1.112653
2	-1.700318	.030831	-55.15	0.000	-1.760746	-1.639891
LANG						
1	-.1954608	.0607921	-3.22	0.001	-.314611	-.0763105
2	-.0738914	.0508609	-1.45	0.146	-.1735769	.0257942
3	-1.778813	.1152515	-15.43	0.000	-2.004702	-1.552924
year						
2012	.0668194	.0125694	5.32	0.000	.0421838	.091455
2013	.1590073	.0126571	12.56	0.000	.1341997	.1838148
2014	.244641	.0127842	19.14	0.000	.2195843	.2696976
2015	.3363177	.0128598	26.15	0.000	.3111129	.3615225
year#FEM						
2012 1	.0421074	.0148078	2.84	0.004	.0130846	.0711302
2013 1	.0368819	.0148482	2.48	0.013	.0077799	.0659839
2014 1	.0230202	.0149012	1.54	0.122	-.0061856	.052226
2015 1	.0336337	.0149763	2.25	0.025	.0042808	.0629866
year#ETH						
2012 1	.0252617	.0316847	0.80	0.425	-.0368392	.0873626
2013 1	-.0337912	.0317251	-1.07	0.287	-.0959714	.0283889
2014 1	.0143913	.0312356	0.46	0.645	-.0468292	.0756119
2015 1	-.0021953	.0314635	-0.07	0.944	-.0638626	.059472
year#FSM						
2012 1	-.0066648	.0195312	-0.34	0.733	-.0449453	.0316157
2013 1	.0132756	.0195663	0.68	0.497	-.0250737	.0516248
2014 1	.0688849	.0196349	3.51	0.000	.0304012	.1073687
2015 1	.0748662	.0197309	3.79	0.000	.0361943	.1135381
year#SEN						
2012 1	.0396433	.0190422	2.08	0.037	.0023213	.0769653
2012 2	-.1284736	.0435469	-2.95	0.003	-.213824	-.0431232
2013 1	.0657911	.0189153	3.48	0.001	.0287178	.1028644
2013 2	-.0816685	.0439518	-1.86	0.063	-.1678126	.0044755
2014 1	.1349494	.0187259	7.21	0.000	.0982473	.1716514
2014 2	-.137979	.044058	-3.13	0.002	-.224331	-.051627
2015 1	.1345257	.0187339	7.18	0.000	.0978079	.1712434
2015 2	-.082735	.0450904	-1.83	0.067	-.1711105	.0056405
year#LANG						
2012 1	-.0122002	.0268682	-0.45	0.650	-.0648609	.0404604
2012 2	.0422901	.0211874	2.00	0.046	.0007635	.0838167
2012 3	-.0393671	.0661455	-0.60	0.552	-.1690098	.0902757
2013 1	.0541421	.0270166	2.00	0.045	.0011906	.1070936
2013 2	.0298295	.0211784	1.41	0.159	-.0116795	.0713384
2013 3	-.0721543	.0664106	-1.09	0.277	-.2023167	.0580081
2014 1	.0623658	.0271417	2.30	0.022	.0091691	.1155624
2014 2	.0759931	.0212843	3.57	0.000	.0342766	.1177096
2014 3	-.099826	.0674119	-1.48	0.139	-.2319509	.032299
2015 1	.080889	.027344	2.96	0.003	.0272957	.1344823
2015 2	.0322964	.0214084	1.51	0.131	-.0096633	.0742561
2015 3	-.1919099	.0700331	-2.74	0.006	-.3291722	-.0546475
fsm_school	-2.30078	.2408849	-9.55	0.000	-2.772906	-1.828654
size	.0000539	.0000515	1.05	0.296	-.0000471	.0001549
_cons	6.153006	.0755458	81.45	0.000	6.004939	6.301073

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	1.69296	.2883756	1.212425	2.363953
var(size)	3.55e-23	1.14e-20	1.1e-295	1.2e+250
var(_cons)	.0327374	.0073614	.021069	.0508682
var(Residual)	.8842498	.00311	.8781753	.8903663

```
LR test vs. linear model: chi2(3) = 6563.80                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-9: Multi-level analysis of KS4 attainment in English

```
Mixed-effects REML regression                   Number of obs     =    157,261
Group variable: school                          Number of groups  =        229

                                                Obs per group:
                                                              min =          1
                                                              avg =      686.7
                                                              max =      1,484

                                                Wald chi2(46)     =   50242.45
Log restricted-likelihood = -258929.08          Prob > chi2       =     0.0000
```

english_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.4945534	.0145744	33.93	0.000	.4659882	.5231186
1.ETH	.0575611	.0318093	1.81	0.070	-.0047839	.119906
1.FSM	-.7124365	.0211965	-33.61	0.000	-.7539809	-.6708922
SEN						
1	-1.414097	.0208329	-67.88	0.000	-1.454928	-1.373265
2	-1.561457	.0519869	-30.04	0.000	-1.66335	-1.459565
LANG						
1	-.0077782	.058094	-0.13	0.893	-.1216404	.106084
2	-.0462698	.0468064	-0.99	0.323	-.1380086	.0454689
3	.2603824	.1695806	1.54	0.125	-.0719895	.5927544
year						
2012	-.012371	.0170636	-0.72	0.468	-.045815	.021073
2013	.0133949	.0167919	0.80	0.425	-.0195165	.0463063
2014	.0689172	.0169603	4.06	0.000	.0356757	.1021587
2015	.105635	.0171367	6.16	0.000	.0720476	.1392224
year#FEM						
2012 1	-.0036317	.0204972	-0.18	0.859	-.0438054	.036542
2013 1	.0148055	.0201235	0.74	0.462	-.0246358	.0542469
2014 1	.0606016	.0202152	3.00	0.003	.0209806	.1002226
2015 1	.0573091	.0203459	2.82	0.005	.0174317	.0971864
year#ETH						
2012 1	.1186061	.0431921	2.75	0.006	.0339511	.2032611
2013 1	.0868903	.0434709	2.00	0.046	.0016888	.1720917
2014 1	.1142135	.0429675	2.66	0.008	.0299987	.1984283
2015 1	.1364494	.0433066	3.15	0.002	.0515699	.2213288
year#FSM						
2012 1	6.90e-06	.0297234	0.00	1.000	-.05825	.0582638
2013 1	-.0079064	.0288437	-0.27	0.784	-.064439	.0486262
2014 1	.0068513	.0290995	0.24	0.814	-.0501828	.0638853
2015 1	.0771457	.0292738	2.64	0.008	.01977	.1345214
year#SEN						
2012 1	-.0254847	.0288567	-0.88	0.377	-.0820429	.0310735
2012 2	-.1394765	.0734388	-1.90	0.058	-.2834138	.0044608
2013 1	-.040203	.0280459	-1.43	0.152	-.0951719	.014766
2013 2	-.1153259	.0715282	-1.61	0.107	-.2555185	.0248667
2014 1	-.0007378	.0278097	-0.03	0.979	-.0552438	.0537681
2014 2	-.292964	.0724904	-4.04	0.000	-.4350425	-.1508855
2015 1	.0673494	.0277705	2.43	0.015	.0129202	.1217787
2015 2	-.1202206	.0730327	-1.65	0.100	-.2633621	.0229208
year#LANG						
2012 1	-.0822257	.0389999	-2.11	0.035	-.158664	-.0057873
2012 2	-.0275615	.0289201	-0.95	0.341	-.0842439	.0291208
2012 3	-.3444212	.1444276	-2.38	0.017	-.6274941	-.0613484
2013 1	-.0779375	.0378088	-2.06	0.039	-.1520413	-.0038336
2013 2	.0079767	.0284433	0.28	0.779	-.0477711	.0637246
2013 3	-.139696	.1451356	-0.96	0.336	-.4241565	.1447644
2014 1	-.0778265	.0379035	-2.05	0.040	-.1521161	-.0035369
2014 2	-.03883	.0284773	-1.36	0.173	-.0946444	.0169844
2014 3	.0774123	.1453517	0.53	0.594	-.2074717	.3622964
2015 1	-.1585564	.0381348	-4.16	0.000	-.2332993	-.0838135
2015 2	-.0490997	.0286063	-1.72	0.086	-.105167	.0069677
2015 3	-.1162436	.1437414	-0.81	0.419	-.3979716	.1654844
fsm_school	-3.670398	.2305433	-15.92	0.000	-4.122254	-3.218541
size	.0001062	.0000465	2.29	0.022	.0000152	.0001973
_cons	7.624507	.0668538	114.05	0.000	7.493476	7.755538

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.9592939	.2486159	.5772309	1.59424
var(size)	5.67e-09	7.08e-09	4.92e-10	6.55e-08
var(_cons)	.0268437	.0085321	.0143978	.0500484
var(Residual)	1.567083	.0055933	1.556158	1.578084

```
LR test vs. linear model: chi2(3) = 5034.78                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-10: Multi-level analysis of KS4 attainment in Welsh

```
Mixed-effects REML regression                   Number of obs     =     25,825
Group variable: school                          Number of groups  =         83

                                                Obs per group:
                                                              min =          1
                                                              avg =      311.1
                                                              max =      1,061

                                                Wald chi2(34)     =    7220.59
Log restricted-likelihood = -41063.136          Prob > chi2       =     0.0000
```

welsh_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.6020171	.0345871	17.41	0.000	.5342276	.6698066
1.ETH	-.0050908	.0864905	-0.06	0.953	-.1746092	.1644275
1.FSM	-.7705807	.0659084	-11.69	0.000	-.8997587	-.6414027
SEN						
1	-1.158656	.0512989	-22.59	0.000	-1.2592	-1.058112
2	-1.228803	.1567428	-7.84	0.000	-1.536013	-.9215925
LANG						
1	.6830486	.1734255	3.94	0.000	.3431409	1.022956
2	.5021744	.1656724	3.03	0.002	.1774624	.8268864
3	.446655	.3819064	1.17	0.242	-.3018678	1.195178
year						
2012	-.0076195	.0382241	-0.20	0.842	-.0825375	.0672984
2013	-.0062246	.037255	-0.17	0.867	-.079243	.0667937
2014	-.0596426	.0368007	-1.62	0.105	-.1317706	.0124853
2015	.0178563	.0368355	0.48	0.628	-.05434	.0900526
year#FEM						
2012 1	.0084929	.0490092	0.17	0.862	-.0875635	.1045493
2013 1	-.0002985	.0475658	-0.01	0.995	-.0935257	.0929286
2014 1	.056241	.0470986	1.19	0.232	-.0360705	.1485525
2015 1	-.0092166	.0472554	-0.20	0.845	-.1018355	.0834023
year#ETH						
2012 1	.00156	.1292504	0.01	0.990	-.2517661	.254886
2013 1	-.0584799	.128243	-0.46	0.648	-.3098315	.1928718
2014 1	-.1683369	.1335188	-1.26	0.207	-.4300289	.093355
2015 1	-.1928981	.1342226	-1.44	0.151	-.4559696	.0701734
year#FSM						
2012 1	-.1122942	.0910466	-1.23	0.217	-.2907423	.0661539
2013 1	.0299819	.0877036	0.34	0.732	-.141914	.2018779
2014 1	-.0206253	.089016	-0.23	0.817	-.1950934	.1538429
2015 1	-.012352	.0888028	-0.14	0.889	-.1864023	.1616983
year#SEN						
2012 1	-.0301255	.0724171	-0.42	0.677	-.1720604	.1118095
2012 2	-.3638488	.2162362	-1.68	0.092	-.7876639	.0599663
2013 1	-.1503035	.0694217	-2.17	0.030	-.2863675	-.0142394
2013 2	-.3781328	.2133892	-1.77	0.076	-.796368	.0401025
2014 1	-.0947831	.0691355	-1.37	0.170	-.2302862	.04072
2014 2	-.1937397	.2222506	-0.87	0.383	-.6293429	.2418635
2015 1	-.0744458	.0688012	-1.08	0.279	-.2092936	.060402
2015 2	-.338329	.2087458	-1.62	0.105	-.7474633	.0708052
fsm_school	-5.208348	.976978	-5.33	0.000	-7.12319	-3.293507
size	-.0002339	.0001272	-1.84	0.066	-.0004831	.0000153
_cons	7.296999	.2214103	32.96	0.000	6.863042	7.730955

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	8.02e-08	.	.	.
var(size)	6.22e-16	.	.	.
var(_cons)	.1100819	.	.	.
var(Residual)	1.39093	.	.	.

```
LR test vs. linear model: chi2(3) = 1278.02                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-11: Multi-level analysis of KS4 attainment in Welsh as a 2nd Language

```
Mixed-effects REML regression                   Number of obs     =     50,454
Group variable: school                          Number of groups  =        199

                                                Obs per group:
                                                              min =          2
                                                              avg =      253.5
                                                              max =      1,277

                                                Wald chi2(41)     =    9213.47
Log restricted-likelihood = -87119.908          Prob > chi2       =     0.0000
```

welsh2ndlang_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	.7048153	.0266584	26.44	0.000	.6525658	.7570649
1.ETH	.1609717	.0605435	2.66	0.008	.0423087	.2796348
1.FSM	-.6128075	.0421917	-14.52	0.000	-.6955016	-.5301133
SEN						
1	-1.273253	.0425916	-29.89	0.000	-1.35673	-1.189775
2	-1.075101	.1237292	-8.69	0.000	-1.317606	-.8325962
LANG						
1	-.1545863	.2208306	-0.70	0.484	-.5874064	.2782337
2	.0905672	.1058281	0.86	0.392	-.116852	.2979864
year						
2012	.1384121	.0338546	4.09	0.000	.0720583	.2047659
2013	.1925598	.0333362	5.78	0.000	.1272221	.2578975
2014	.309397	.0329155	9.40	0.000	.2448838	.3739103
2015	.4057345	.0325864	12.45	0.000	.3418663	.4696027
year#FEM						
2012 1	.0242628	.0392968	0.62	0.537	-.0527576	.1012832
2013 1	-.0213873	.038522	-0.56	0.579	-.096889	.0541144
2014 1	-.0054122	.0379988	-0.14	0.887	-.0798885	.0690642
2015 1	-.0495746	.037491	-1.32	0.186	-.1230556	.0239064
year#ETH						
2012 1	-.0116707	.0896773	-0.13	0.896	-.187435	.1640937
2013 1	.0034424	.085164	0.04	0.968	-.1634759	.1703607
2014 1	.0046514	.0791937	0.06	0.953	-.1505654	.1598682
2015 1	-.0905935	.0789405	-1.15	0.251	-.245314	.0641269
year#FSM						
2012 1	-.0297464	.0619834	-0.48	0.631	-.1512317	.0917389
2013 1	.0584752	.0601495	0.97	0.331	-.0594156	.176366
2014 1	.0034375	.0600376	0.06	0.954	-.114234	.121109
2015 1	-.0964358	.0584809	-1.65	0.099	-.2110562	.0181846
year#SEN						
2012 1	.0549205	.0618994	0.89	0.375	-.0664001	.1762411
2012 2	-.1692632	.1801201	-0.94	0.347	-.5222922	.1837657
2013 1	.1368568	.0598309	2.29	0.022	.0195905	.2541232
2013 2	-.0311353	.1725781	-0.18	0.857	-.3693822	.3071115
2014 1	.3256276	.0586497	5.55	0.000	.2106764	.4405788
2014 2	-.1819824	.1815018	-1.00	0.316	-.5377193	.1737545
2015 1	.2309239	.057108	4.04	0.000	.1189943	.3428535
2015 2	.3036559	.1817643	1.67	0.095	-.0525955	.6599073
year#LANG						
2012 1	.1455737	.3133356	0.46	0.642	-.4685527	.7597001
2012 2	.0276606	.0493653	0.56	0.575	-.0690936	.1244149
2013 1	.2831503	.3600255	0.79	0.432	-.4224868	.9887874
2013 2	.1195403	.0484776	2.47	0.014	.024526	.2145546
2014 1	1.282385	.4850775	2.64	0.008	.331651	2.23312
2014 2	.0408574	.0492379	0.83	0.407	-.0556471	.1373618
2015 1	.3558591	.4709845	0.76	0.450	-.5672536	1.278972
2015 2	.0853121	.0490171	1.74	0.082	-.0107597	.1813838
fsm_school	-2.748345	.5319903	-5.17	0.000	-3.791027	-1.705663
size	-.0000279	.0001047	-0.27	0.790	-.0002332	.0001773
_cons	7.600542	.1607332	47.29	0.000	7.285511	7.915574

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	1.974344	.9779895	.7477921	5.212724
var(size)	3.95e-17	1.11e-16	1.58e-19	9.91e-15
var(_cons)	.2023788	.0356852	.1432432	.2859276
var(Residual)	1.823304	.0115072	1.80089	1.845998

LR test vs. linear model: chi2(3) = 5599.18 Prob > chi2 = 0.0000

Source: SQW

Figure 0-12: Multi-level analysis of KS4 attainment in Maths

```
Mixed-effects REML regression                   Number of obs     =    155,619
Group variable: school                          Number of groups  =        233

                                                Obs per group:
                                                              min =          1
                                                              avg =      667.9
                                                              max =      1,481

                                                Wald chi2(46)     =   31597.02
Log restricted-likelihood = -288852.58          Prob > chi2       =     0.0000
```

maths_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.FEM	-.1554981	.0181263	-8.58	0.000	-.191025	-.1199713
1.ETH	.2730138	.0394832	6.91	0.000	.1956282	.3503994
1.FSM	-.879631	.0264612	-33.24	0.000	-.931494	-.8277679
SEN						
1	-1.511609	.0261326	-57.84	0.000	-1.562828	-1.46039
2	-1.752418	.0648235	-27.03	0.000	-1.87947	-1.625366
LANG						
1	-.0184016	.0713506	-0.26	0.796	-.1582462	.121443
2	.0471026	.0569922	0.83	0.409	-.0646001	.1588053
3	.5895463	.1957473	3.01	0.003	.2058886	.973204
year						
2012	.0414547	.0211233	1.96	0.050	.0000539	.0828556
2013	.0632473	.0207759	3.04	0.002	.0225274	.1039672
2014	.1029157	.0210127	4.90	0.000	.0617316	.1440998
2015	.1961238	.0212166	9.24	0.000	.1545401	.2377076
year#FEM						
2012 1	-.0210672	.0254571	-0.83	0.408	-.0709623	.0288278
2013 1	-.0156602	.0249854	-0.63	0.531	-.0646306	.0333102
2014 1	.0246954	.0251439	0.98	0.326	-.0245858	.0739767
2015 1	.0227573	.0252792	0.90	0.368	-.0267891	.0723036
year#ETH						
2012 1	.1016611	.0535946	1.90	0.058	-.0033825	.2067046
2013 1	-.0150393	.0538707	-0.28	0.780	-.1206239	.0905453
2014 1	.0020991	.0535029	0.04	0.969	-.1027647	.1069629
2015 1	.0231666	.0538999	0.43	0.667	-.0824752	.1288084
year#FSM						
2012 1	.0307355	.0370861	0.83	0.407	-.0419519	.1034228
2013 1	.038046	.0359414	1.06	0.290	-.032398	.1084899
2014 1	.0822742	.0364835	2.26	0.024	.0107679	.1537805
2015 1	.1268154	.0365563	3.47	0.001	.0551665	.1984643
year#SEN						
2012 1	-.0020061	.0360927	-0.06	0.956	-.0727465	.0687343
2012 2	-.0143139	.0906695	-0.16	0.875	-.1920228	.1633951
2013 1	-.0666461	.035065	-1.90	0.057	-.1353721	.00208
2013 2	-.0219532	.0886845	-0.25	0.804	-.1957717	.1518653
2014 1	-.0294778	.0349348	-0.84	0.399	-.0979488	.0389933
2014 2	-.1250385	.0902635	-1.39	0.166	-.3019516	.0518747
2015 1	-.0181731	.0348152	-0.52	0.602	-.0864096	.0500634
2015 2	-.0828514	.0898987	-0.92	0.357	-.2590495	.0933467
year#LANG						
2012 1	-.0079789	.048224	-0.17	0.869	-.1024962	.0865383
2012 2	-.0508913	.0357697	-1.42	0.155	-.1209986	.019216
2012 3	-.4916913	.1772726	-2.77	0.006	-.8391393	-.1442433
2013 1	.0077112	.0466984	0.17	0.869	-.083816	.0992384
2013 2	-.0279469	.0351206	-0.80	0.426	-.0967821	.0408882
2013 3	-.0980533	.1767709	-0.55	0.579	-.4445178	.2484113
2014 1	-.1482785	.0468809	-3.16	0.002	-.2401634	-.0563935
2014 2	-.0748768	.0352045	-2.13	0.033	-.1438763	-.0058773
2014 3	-.1342802	.1752341	-0.77	0.444	-.4777326	.2091722
2015 1	-.1365059	.0472018	-2.89	0.004	-.2290196	-.0439921
2015 2	-.1087699	.035312	-3.08	0.002	-.1779802	-.0395596
2015 3	-.4066788	.176624	-2.30	0.021	-.7528554	-.0605022
fsm_school	-4.19535	.2613966	-16.05	0.000	-4.707678	-3.683022
size	.0001732	.0000561	3.09	0.002	.0000632	.0002833
_cons	7.617775	.0800701	95.14	0.000	7.460841	7.77471

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
school: Independent				
var(fsm_sc~l)	.7694244	.2855771	.3717378	1.592558
var(size)	1.05e-08	1.26e-08	1.00e-09	1.10e-07
var(_cons)	.046125	.0150928	.024289	.0875917
var(Residual)	2.384003	.008554	2.367296	2.400827

```
LR test vs. linear model: chi2(3) = 4426.59                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-13: Multi-level analysis of attainment between KS2 and KS3 in English

```
Mixed-effects REML regression                   Number of obs     =     55,152
Group variable: ks3_school                      Number of groups  =        240

                                                Obs per group:
                                                              min =          1
                                                              avg =      229.8
                                                              max =        551

                                                Wald chi2(20)     =   67755.04
Log restricted-likelihood =  -54225.31          Prob > chi2       =     0.0000
```

engta3_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
engta2_H	.7746449	.0045076	171.85	0.000	.7658101	.7834797
1.FEM	.1611197	.0079342	20.31	0.000	.145569	.1766705
1.ETH	.092442	.017104	5.40	0.000	.0589187	.1259653
1.FSM3	-.1917933	.0107594	-17.83	0.000	-.2128813	-.1707052
SEN3						
1	-.3621973	.0102801	-35.23	0.000	-.3823459	-.3420487
2	-.5599244	.0261146	-21.44	0.000	-.6111081	-.5087407
ks3_LANG						
1	-.0471755	.0418537	-1.13	0.260	-.1292072	.0348561
2	.089915	.0334827	2.69	0.007	.0242901	.15554
3	-1.282479	.087372	-14.68	0.000	-1.453725	-1.111233
2.cohort	.0460055	.0096043	4.79	0.000	.0271815	.0648296
cohort#FEM						
2 1	.0220371	.0110791	1.99	0.047	.0003225	.0437518
cohort#ETH						
2 1	-.0019829	.0231472	-0.09	0.932	-.0473505	.0433847
cohort#FSM3						
2 1	.025818	.0148766	1.74	0.083	-.0033396	.0549756
cohort#SEN3						
2 1	.0053554	.013472	0.40	0.691	-.0210493	.0317601
2 2	.0442533	.0360462	1.23	0.220	-.026396	.1149026
cohort#ks3_LANG						
2 1	-.0006375	.0192325	-0.03	0.974	-.0383325	.0370575
2 2	-.0608798	.0153244	-3.97	0.000	-.0909151	-.0308444
2 3	.0034555	.0683292	0.05	0.960	-.1304672	.1373782
ks3_fsm_school	-.8624258	.1550577	-5.56	0.000	-1.166333	-.5585183
size	.0000525	.0000364	1.44	0.148	-.0000187	.0001238
_cons	2.483646	.0370773	66.99	0.000	2.410975	2.556316

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks3_school: Independent				
var(ks3_fs~l)	.4470661	.1125748	.2729181	.7323373
var(size)	1.06e-07	2.29e-08	6.92e-08	1.62e-07
var(_cons)	.0166352	.0038455	.0105744	.0261697
var(Residual)	.4113738	.0024887	.4065249	.4162805

```
LR test vs. linear model: chi2(3) = 3264.11                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-14: Multi-level analysis of attainment between KS2 and KS3 in Welsh

```
Mixed-effects REML regression                   Number of obs     =     10,232
Group variable: ks3_school                      Number of groups  =         70

                                                Obs per group:
                                                              min =          1
                                                              avg =      146.2
                                                              max =        442

                                                Wald chi2(20)     =   12280.78
Log restricted-likelihood = -9663.9998          Prob > chi2       =     0.0000
```

cymta3_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cymta2_H	.7932398	.0108524	73.09	0.000	.7719694	.8145102
1.FEM	.1863164	.017592	10.59	0.000	.1518368	.2207961
1.ETH	-.0458386	.0595788	-0.77	0.442	-.1626108	.0709337
1.FSM3	-.2669797	.0304041	-8.78	0.000	-.3265707	-.2073887
SEN3						
1	-.377986	.0233034	-16.22	0.000	-.4236599	-.3323122
2	-.6731501	.0707332	-9.52	0.000	-.8117846	-.5345155
ks3_LANG						
1	.2557059	.1878659	1.36	0.173	-.1125045	.6239162
2	.2571669	.1834833	1.40	0.161	-.1024538	.6167877
3	-1.210666	.3981764	-3.04	0.002	-1.991077	-.4302547
2.cohort	-.133711	.1260675	-1.06	0.289	-.3807988	.1133768
cohort#FEM						
2 1	.0250539	.0245849	1.02	0.308	-.0231316	.0732394
cohort#ETH						
2 1	.0230555	.081002	0.28	0.776	-.1357056	.1818165
cohort#FSM3						
2 1	.0915869	.0419075	2.19	0.029	.0094497	.1737242
cohort#SEN3						
2 1	-.029048	.0301792	-0.96	0.336	-.0881982	.0301022
2 2	.132305	.1040497	1.27	0.204	-.0716286	.3362387
cohort#ks3_LANG						
2 1	.1929927	.1262718	1.53	0.126	-.0544955	.4404809
2 2	.1669123	.1262789	1.32	0.186	-.0805898	.4144145
2 3	.5021253	.3809328	1.32	0.187	-.2444893	1.24874
ks3_fsm_school	-.4787017	.5716264	-0.84	0.402	-1.599069	.6416654
size	.0000516	.0001292	0.40	0.689	-.0002015	.0003048
_cons	2.092618	.1980937	10.56	0.000	1.704361	2.480875

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks3_school: Independent				
var(ks3_fs~l)	4.68e-09	2.46e-08	1.61e-13	.0001363
var(size)	6.03e-07	1.78e-07	3.38e-07	1.08e-06
var(_cons)	.0599358	.0129872	.0391962	.0916494
var(Residual)	.3742762	.0052759	.3640771	.3847609

```
LR test vs. linear model: chi2(3) = 795.26                    Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-15: Multi-level analysis of attainment between KS2 and KS3 in Welsh as a 2nd Language

Mixed-effects REML regression — Number of obs = 41,837
Group variable: ks3_school — Number of groups = 202

Obs per group:
min = 1
avg = 207.1
max = 542

Wald chi2(19) = 27925.12
Log restricted-likelihood = -46689.116 — Prob > chi2 = 0.0000

wel3_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
wel2_H	.4669948	.0052811	88.43	0.000	.4566441	.4773455
1.FEM	.2629375	.0103929	25.30	0.000	.2425678	.2833071
1.ETH	.1736584	.0208192	8.34	0.000	.1328535	.2144634
1.FSM3	-.2575454	.0135648	-18.99	0.000	-.284132	-.2309588
SEN3						
1	-.5745555	.0131375	-43.73	0.000	-.6003046	-.5488064
2	-.9347665	.0383256	-24.39	0.000	-1.009883	-.8596498
ks3_LANG						
1	-1.668904	.8101096	-2.06	0.039	-3.256689	-.0811181
2	-.0226188	.0746967	-0.30	0.762	-.1690216	.1237841
3	-2.06112	.1242352	-16.59	0.000	-2.304616	-1.817623
2.cohort	.0168092	.0119335	1.41	0.159	-.0065801	.0401985
cohort#FEM						
2 1	.0227187	.0144809	1.57	0.117	-.0056633	.0511007
cohort#ETH						
2 1	-.0205233	.0282502	-0.73	0.468	-.0758927	.0348462
cohort#FSM3						
2 1	.0050475	.0188214	0.27	0.789	-.0318418	.0419368
cohort#SEN3						
2 1	.0311575	.0177025	1.76	0.078	-.0035387	.0658538
2 2	.1982	.0544251	3.64	0.000	.0915288	.3048712
cohort#ks3_LANG						
1 1	0	(empty)				
2 1	0	(omitted)				
2 2	.0088959	.0305143	0.29	0.771	-.0509109	.0687027
2 3	-.3734712	.0907086	-4.12	0.000	-.5512567	-.1956856
ks3_fsm_school	-.7811273	.2371321	-3.29	0.001	-1.245898	-.3163569
size	.0000566	.0000535	1.06	0.290	-.0000483	.0001614
_cons	3.840492	.054954	69.89	0.000	3.732785	3.9482

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks3_school: Independent				
var(ks3_fs~l)	.5040261	.1978943	.2334792	1.088072
var(size)	2.23e-07	4.89e-08	1.46e-07	3.43e-07
var(_cons)	.0674341	.0127674	.0465286	.0977325
var(Residual)	.5341543	.0037112	.5269297	.5414778

LR test vs. linear model: chi2(3) = 5255.73 — Prob > chi2 = 0.0000

Source: SQW

Figure 0-16: Multi-level analysis of attainment between KS2 and KS3 in Maths

```
Mixed-effects REML regression                   Number of obs     =     55,162
Group variable: ks3_school                      Number of groups  =        240

                                                Obs per group:
                                                              min =          1
                                                              avg =      229.8
                                                              max =        551

                                                Wald chi2(20)     =   71801.21
Log restricted-likelihood = -58867.234          Prob > chi2       =     0.0000
```

math3_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
math2_H	.9394107	.0049377	190.25	0.000	.929733	.9490884
1.FEM	.0395568	.0086283	4.58	0.000	.0226457	.0564678
1.ETH	.1592186	.0185989	8.56	0.000	.1227653	.1956718
1.FSM3	-.2324352	.0117001	-19.87	0.000	-.2553669	-.2095034
SEN3						
1	-.3966511	.0110964	-35.75	0.000	-.4183997	-.3749024
2	-.5331417	.0283734	-18.79	0.000	-.5887526	-.4775309
ks3_LANG						
1	-.069815	.0469189	-1.49	0.137	-.1617744	.0221444
2	.0829871	.0373536	2.22	0.026	.0097755	.1561988
3	-.8689783	.0892265	-9.74	0.000	-1.043859	-.6940976
2.cohort	.0594908	.0104449	5.70	0.000	.0390191	.0799624
cohort#FEM						
2 1	-.001172	.0120515	-0.10	0.923	-.0247925	.0224485
cohort#ETH						
2 1	-.02254	.0251741	-0.90	0.371	-.0718803	.0268003
cohort#FSM3						
2 1	.0141745	.0161809	0.88	0.381	-.0175394	.0458885
cohort#SEN3						
2 1	-.013317	.0146522	-0.91	0.363	-.0420347	.0154007
2 2	.085633	.0392237	2.18	0.029	.0087559	.1625101
cohort#ks3_LANG						
2 1	.0278393	.0209208	1.33	0.183	-.0131647	.0688432
2 2	-.0413612	.0166703	-2.48	0.013	-.0740344	-.008688
2 3	-.1779367	.0741505	-2.40	0.016	-.323269	-.0326043
ks3_fsm_school	-.798227	.1599624	-4.99	0.000	-1.111748	-.4847064
size	-.0000273	.0000382	-0.71	0.475	-.0001022	.0000476
_cons	2.045479	.0407356	50.21	0.000	1.965639	2.125319

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks3_school: Independent				
var(ks3_fs~l)	.3157966	.1205083	.1494817	.6671553
var(size)	1.07e-07	2.55e-08	6.68e-08	1.71e-07
var(_cons)	.0249967	.0052799	.016523	.037816
var(Residual)	.4868602	.0029457	.4811209	.492668

```
LR test vs. linear model: chi2(3) = 3049.39                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-17: Multi-level analysis of attainment between KS3 and KS4 in English

```
Mixed-effects REML regression                   Number of obs     =     89,159
Group variable: ks4_school                      Number of groups  =        214

                                                Obs per group:
                                                              min =          1
                                                              avg =      416.6
                                                              max =        921

                                                Wald chi2(29)     =  139615.73
Log restricted-likelihood = -116579.62          Prob > chi2       =     0.0000
```

english_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
engta_H	1.041203	.0036639	284.18	0.000	1.034022	1.048384
1.FEM	.2210593	.0104676	21.12	0.000	.2005431	.2415755
1.ETH	.1157817	.0234542	4.94	0.000	.0698123	.1617511
1.FSM4	-.3352065	.0149748	-22.38	0.000	-.3645565	-.3058565
SEN4						
1	-.5324138	.0145468	-36.60	0.000	-.560925	-.5039026
2	-.4280162	.0377419	-11.34	0.000	-.501989	-.3540434
ks4_LANG						
1	-.0448214	.0492836	-0.91	0.363	-.1414155	.0517728
2	-.0510685	.0417842	-1.22	0.222	-.132964	.030827
3	-.3630101	.2524748	-1.44	0.150	-.8578516	.1318314
cohort						
4	-.0330165	.0123394	-2.68	0.007	-.0572014	-.0088317
5	-.1107721	.0124234	-8.92	0.000	-.1351215	-.0864228
cohort#FEM						
4 1	.0380391	.0147095	2.59	0.010	.009209	.0668691
5 1	.0277056	.0147341	1.88	0.060	-.0011727	.056584
cohort#ETH						
4 1	.0574126	.0318818	1.80	0.072	-.0050747	.1198998
5 1	.0308044	.0320158	0.96	0.336	-.0319454	.0935543
cohort#FSM4						
4 1	.0117028	.0210857	0.56	0.579	-.0296244	.0530299
5 1	.0651304	.0210944	3.09	0.002	.0237862	.1064746
cohort#SEN4						
4 1	.0178156	.0196522	0.91	0.365	-.0207019	.0563332
4 2	-.1100298	.053905	-2.04	0.041	-.2156816	-.004378
5 1	.0825035	.0195669	4.22	0.000	.0441531	.120854
5 2	.0636391	.0539938	1.18	0.239	-.0421867	.169465
cohort#ks4_LANG						
4 1	.030884	.0261476	1.18	0.238	-.0203643	.0821323
4 2	-.0825806	.0209202	-3.95	0.000	-.1235835	-.0415777
4 3	.4004972	.3268577	1.23	0.220	-.240132	1.041126
5 1	-.0888971	.0262631	-3.38	0.001	-.1403718	-.0374224
5 2	-.0786209	.020922	-3.76	0.000	-.1196273	-.0376146
5 3	.3813302	.3193434	1.19	0.232	-.2445713	1.007232
ks4_fsm_school	-1.294417	.2204241	-5.87	0.000	-1.72644	-.8623936
size	.0000139	.0000331	0.42	0.674	-.000051	.0000788
_cons	1.825921	.0570493	32.01	0.000	1.714107	1.937736

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks4_school: Independent				
var(ks4_fs~l)	.7044116	.2055002	.3976516	1.247815
var(size)	5.95e-09	6.37e-09	7.28e-10	4.86e-08
var(_cons)	.0218668	.0061413	.0126103	.0379181
var(Residual)	.7930409	.0037622	.7857013	.8004491

```
LR test vs. linear model: chi2(3) = 3493.92                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-18: Multi-level analysis of attainment between KS3 and KS4 in Welsh

```
Mixed-effects REML regression                   Number of obs     =     14,742
Group variable: ks4_school                      Number of groups  =         66

                                                Obs per group:
                                                              min =          1
                                                              avg =      223.4
                                                              max =        658

                                                Wald chi2(26)     =   27293.92
Log restricted-likelihood =  -17501.21          Prob > chi2       =     0.0000
```

welsh_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cymta_H	1.11323	.0083667	133.06	0.000	1.096832	1.129629
1.FEM	.2615143	.0227743	11.48	0.000	.2168776	.3061511
1.ETH	-.1031507	.0663663	-1.55	0.120	-.2332263	.0269249
1.FSM4	-.2109265	.0407563	-5.18	0.000	-.2908074	-.1310457
SEN4						
1	-.3516129	.0337044	-10.43	0.000	-.4176723	-.2855536
2	-.351692	.0993758	-3.54	0.000	-.5464649	-.156919
ks4_LANG						
1	.7076523	.1957114	3.62	0.000	.3240651	1.09124
2	.4138192	.1924155	2.15	0.032	.0366917	.7909467
cohort						
4	.1076632	.1528509	0.70	0.481	-.191919	.4072455
5	.1284216	.1455434	0.88	0.378	-.1568382	.4136815
cohort#FEM						
4 1	.0192781	.0320814	0.60	0.548	-.0436002	.0821565
5 1	-.0513644	.0319214	-1.61	0.108	-.1139293	.0112004
cohort#ETH						
4 1	-.0216909	.0964551	-0.22	0.822	-.2107394	.1673577
5 1	.022694	.0975477	0.23	0.816	-.168496	.213884
cohort#FSM4						
4 1	-.1183333	.0584431	-2.02	0.043	-.2328797	-.0037869
5 1	-.0388187	.0578827	-0.67	0.502	-.1522667	.0746293
cohort#SEN4						
4 1	.0241735	.046331	0.52	0.602	-.0666336	.1149807
4 2	.138497	.1479979	0.94	0.349	-.1515737	.4285676
5 1	.0088662	.0458626	0.19	0.847	-.0810228	.0987552
5 2	.3375028	.1397271	2.42	0.016	.0636428	.6113628
cohort#ks4_LANG						
4 1	-.1852489	.1529784	-1.21	0.226	-.485081	.1145833
4 2	-.2420137	.1532016	-1.58	0.114	-.5422834	.0582559
5 1	-.3484662	.1457065	-2.39	0.017	-.6340457	-.0628867
5 2	-.2322143	.1459281	-1.59	0.112	-.5182282	.0537996
ks4_fsm_school	-2.813243	.8761137	-3.21	0.001	-4.530394	-1.096092
size	-7.68e-06	.0001039	-0.07	0.941	-.0002114	.000196
_cons	.9492725	.2302027	4.12	0.000	.4980835	1.400462

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks4_school: Independent				
var(ks4_fs~l)	1.360123	2.201331	.0570067	32.45116
var(size)	4.47e-08	2.43e-08	1.53e-08	1.30e-07
var(_cons)	.031231	.0212776	.0082161	.1187154
var(Residual)	.6168824	.0072079	.6029156	.6311726

```
LR test vs. linear model: chi2(3) = 925.06                    Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-19: Multi-level analysis of attainment between KS3 and KS4 in Welsh as a 2nd Language

```
Mixed-effects REML regression                   Number of obs     =     29,493
Group variable: ks4_school                      Number of groups  =        179

                                                Obs per group:
                                                              min =          1
                                                              avg =      164.8
                                                              max =        796

                                                Wald chi2(26)     =   29382.35
Log restricted-likelihood = -42344.086          Prob > chi2       =     0.0000
```

welsh2ndlang_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
wel_H	1.015796	.0071562	141.95	0.000	1.00177	1.029822
1.FEM	.3782994	.0214741	17.62	0.000	.3362111	.4203878
1.ETH	.1443832	.0469311	3.08	0.002	.0524	.2363663
1.FSM4	-.259266	.0331324	-7.83	0.000	-.3242042	-.1943277
SEN4						
1	-.4309518	.0330104	-13.06	0.000	-.495651	-.3662526
2	-.0672576	.0926459	-0.73	0.468	-.2488401	.114325
ks4_LANG						
1	.7896559	.3659414	2.16	0.031	.072424	1.506888
2	.3658244	.1215901	3.01	0.003	.1275123	.6041366
cohort						
4	.0585554	.0250094	2.34	0.019	.0095379	.1075729
5	-.0030863	.0247805	-0.12	0.901	-.0516551	.0454826
cohort#FEM						
4 1	-.010626	.0295636	-0.36	0.719	-.0685696	.0473175
5 1	-.0390751	.0291485	-1.34	0.180	-.096205	.0180548
cohort#ETH						
4 1	.0536577	.0615251	0.87	0.383	-.0669292	.1742446
5 1	-.027197	.0606969	-0.45	0.654	-.1461607	.0917667
cohort#FSM4						
4 1	.0121769	.0464369	0.26	0.793	-.0788377	.1031916
5 1	-.0635299	.0452576	-1.40	0.160	-.1522331	.0251732
cohort#SEN4						
4 1	.0461284	.0445545	1.04	0.301	-.0411968	.1334535
4 2	-.0408359	.1370848	-0.30	0.766	-.3095173	.2278454
5 1	-.0327137	.0435106	-0.75	0.452	-.1179929	.0525656
5 2	.0836119	.1384417	0.60	0.546	-.1877288	.3549526
cohort#ks4_LANG						
4 1	.2685108	.4184259	0.64	0.521	-.5515889	1.088611
4 2	-.1108403	.0382881	-2.89	0.004	-.1858836	-.035797
5 1	.1566929	.4264985	0.37	0.713	-.6792289	.9926146
5 2	-.0469107	.0379978	-1.23	0.217	-.121385	.0275636
ks4_fsm_school	-1.757989	.5830514	-3.02	0.003	-2.900749	-.6152293
size	-.0001739	.0000934	-1.86	0.063	-.000357	9.25e-06
_cons	2.33695	.1562149	14.96	0.000	2.030774	2.643125

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks4_school: Independent				
var(ks4_fs~l)	1.627938	1.17783	.3942618	6.721886
var(size)	5.04e-08	4.11e-08	1.02e-08	2.49e-07
var(_cons)	.2014831	.0475831	.126828	.3200827
var(Residual)	1.009884	.0083539	.9936425	1.026391

```
LR test vs. linear model: chi2(3) = 5696.34                   Prob > chi2 = 0.0000
```

Source: SQW

Figure 0-20: Multi-level analysis of attainment between KS3 and KS4 in Maths

```
Mixed-effects REML regression                   Number of obs     =     88,187
Group variable: ks4_school                      Number of groups  =        215

                                                Obs per group:
                                                              min =          1
                                                              avg =      410.2
                                                              max =        920

                                                Wald chi2(29)     =  167286.24
Log restricted-likelihood = -124612.26          Prob > chi2       =     0.0000
```

maths_H	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
math_H	1.242076	.0035535	349.53	0.000	1.235112	1.249041
1.FEM	-.1244143	.011636	-10.69	0.000	-.1472205	-.1016081
1.ETH	.1355856	.0261819	5.18	0.000	.0842701	.1869011
1.FSM4	-.2999988	.0167915	-17.87	0.000	-.3329094	-.2670881
SEN4						
1	-.3391236	.016317	-20.78	0.000	-.3711044	-.3071428
2	-.1503769	.0421752	-3.57	0.000	-.2330388	-.0677149
ks4_LANG						
1	.2081239	.0649012	3.21	0.001	.0809198	.335328
2	.0820429	.0541491	1.52	0.130	-.0240875	.1881732
3	.4017497	.2260468	1.78	0.076	-.041294	.8447933
cohort						
4	-.0693516	.0137627	-5.04	0.000	-.096326	-.0423771
5	-.0618	.0138353	-4.47	0.000	-.0889167	-.0346832
cohort#FEM						
4 1	.0042679	.0164555	0.26	0.795	-.0279842	.0365201
5 1	-.0048084	.0164621	-0.29	0.770	-.0370736	.0274568
cohort#ETH						
4 1	-.0266518	.0357055	-0.75	0.455	-.0966333	.0433297
5 1	.0200486	.0358324	0.56	0.576	-.0501815	.0902787
cohort#FSM4						
4 1	.008407	.0237891	0.35	0.724	-.0382188	.0550328
5 1	.0301397	.0236938	1.27	0.203	-.0162993	.0765786
cohort#SEN4						
4 1	-.029657	.0221672	-1.34	0.181	-.0731039	.01379
4 2	.0065023	.060599	0.11	0.915	-.1122695	.125274
5 1	-.0422483	.0220361	-1.92	0.055	-.0854381	.0009416
5 2	.0154371	.059941	0.26	0.797	-.102045	.1329192
cohort#ks4_LANG						
4 1	-.1149943	.0290651	-3.96	0.000	-.1719609	-.0580278
4 2	-.0785705	.0232837	-3.37	0.001	-.1242057	-.0329353
4 3	-.0599546	.2826644	-0.21	0.832	-.6139666	.4940574
5 1	-.2115577	.029231	-7.24	0.000	-.2688493	-.154266
5 2	-.0879696	.0232599	-3.78	0.000	-.1335582	-.0423809
5 3	.2733118	.3096023	0.88	0.377	-.3334977	.8801212
ks4_fsm_school	-1.418889	.2508502	-5.66	0.000	-1.910547	-.927232
size	.0000484	.0000401	1.21	0.228	-.0000302	.0001269
_cons	.1948649	.0691305	2.82	0.005	.0593717	.3303581

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
ks4_school: Independent				
var(ks4_fs~l)	.252583	.2182751	.0464322	1.374006
var(size)	1.14e-08	7.62e-09	3.07e-09	4.23e-08
var(_cons)	.0510827	.0103257	.0343728	.0759158
var(Residual)	.9789192	.004669	.9698106	.9881132

LR test vs. linear model: chi2(3) = 4860.90 Prob > chi2 = 0.0000

Source: SQW