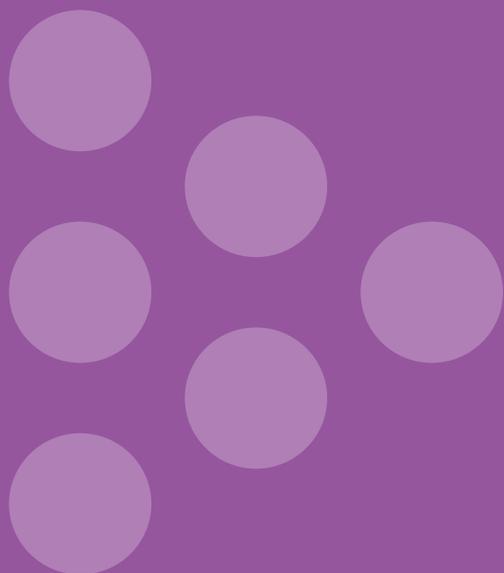


Schools' responses to Covid-19

Technical report on the Wave 1 survey

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Contents

Acknowledgements	i
Introduction	1
Sampling	3
Analysis	9
Regression analysis	10
Outcome measures	10
Final model outputs	13
References	41

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Introduction

On 10 May the Prime Minister announced a phased return of some children to school in England from 1 June. Schools had been closed to all but vulnerable and keyworker children since 20 March, meaning that most children have been educated at home for a period of ten weeks, and some year groups are not expected to return to school until the autumn.

NFER conducted a national survey of 1233 senior leaders and 1821 teachers in publicly funded, mainstream primary and secondary schools in England. This report contains information on sampling and analysis.

Box 1. NFER survey of schools' responses to Covid-19

Sample

From 7 to 17 May 2020, NFER collected data via a survey sent to all 20,553 state-funded mainstream primary and secondary schools in England. We asked senior leaders (headteachers, principals and deputy headteachers) to complete the survey themselves and pass the survey on to up to two teachers of different key stages (primary schools), or up to four teachers of different subject areas (secondary schools). We received responses from 1233 senior leaders and 1821 teachers in 1462 primary schools (including middle deemed primary) and 691 secondary schools (including middle deemed secondary and all-through schools), representing nine per cent of the 17,170 primary schools and 20 per cent of the 3383 secondary schools in England. We weighted the data to ensure that our findings are representative of mainstream schools in England. Some schools provided more than the requested number of responses, which was also addressed by weighting the data.

Data collected

The survey focused on four main areas: schools' provision of remote learning during the Covid-19 pandemic and pupils' engagement; schools' provision for vulnerable children and children of keyworkers; staff workload and work satisfaction; and schools' preparedness for opening more fully after lockdown. The survey also asked respondents for some information about themselves, including their job role, time in teaching, gender and age.

Analysis

The NFER team used DfE administrative data to identify the characteristics of each school, including phase, proportion of pupils eligible for free school meals (FSM), school type (local authority or academy), and region. Weighting used the distribution of the achieved sample relative to the national population of school phase and FSM quintile. Weightings were adjusted to account for the number of responses per school.

The analysis used three main approaches: descriptive statistics for all of the survey questions; tests of statistical significance to identify associations between selected questions and school characteristics; and regression models for pupil engagement with learning, engagement of disadvantaged pupils, work satisfaction, workload, and preparedness for opening schools more fully. Results were considered statistically significant if the probability of a result occurring by chance was less than five per cent ($p = < 0.05$).

Reports

The research has produced the following reports on Schools' Responses to Covid-19:

1. Returning pupils to school
2. Pupil engagement in remote learning
3. Support for vulnerable pupils and the children of keyworkers
4. Job satisfaction and workload of teachers and senior leaders
5. Key findings from the Wave 1 survey
6. Technical report.

A Wave 2 survey will take place in July 2020, with findings to be published later in the summer.

Sampling

The population of maintained schools in England was based on a file downloaded from the Department for Education (DfE) website in April 2020¹. This file was matched to Key Stage 2, Key Stage 4, census and Ofsted files downloaded at the same time, and further matched to a register of schools database held by NFER. The resulting file contained 20,553 publicly funded primary and secondary schools. To determine if respondents to the NFER survey were representative of a population of all schools, it was decided, in discussion with the Nuffield Foundation, to check representativeness against school phase, i.e. primary or secondary, and the proportion of pupils eligible for free school meals (FSM).

Based on data downloaded from the DfE, FSM information identifying the proportion of pupils eligible for FSM at any time during the past six years² was used to determine quintiles separately for primary and secondary schools. Two categories for missing were also created; one for a primary school missing FSM information and one for secondary schools. A final category was created that identified all-through schools. Table 1 shows the distribution of this weighting variable.

Table 1

Category	%
Primary-LowestQT ³	16.1
Primary-2ndLowQT	15.6
Primary-MidQT	15.8
Primary-2ndHighQT	15.7
Primary-HighestQT	15.4
Primary-FSM missing	5.0
Secondary-LowestQT	3.1
Secondary-2ndLowQT	3.1
Secondary-MidQT	3.0
Secondary-2ndHighQT	3.0
Secondary-HighestQT	2.9
Secondary-FSM missing	0.6
All-through Schools	0.8

¹ File downloaded was 'edubaseallstatefunded20200428'.

² Variable used from census file was PNUMFSMEVER.

³ QT stands for quintile.

The distribution of this weighting variable was compared between the population of all schools and the sample of responding schools. This was done for both the senior leader and teacher surveys as they were analysed and reported separately.

The number of respondents to the senior leader survey was 1233 and these leaders came from 1137 schools, with 92.9 per cent of these schools having a single respondent. The file containing the responding schools was matched to the population file to pick up the representativeness variable. and the two files containing the population of schools and the responding schools were combined to allow for a representativeness check. This was carried out by running a cross-tabulation with a Chi-square test for independence. To take account of a number schools providing more than one respondent, this analysis was weighted by the number of senior leaders responding from each school. This was to ensure that we were not inadvertently introducing bias into the main analysis of survey responses.

Table 2 shows the distribution of responses to the senior leader survey in relation to five groups (quintiles), representing the proportion of pupils in the school eligible for FSM, for primary, secondary and all-through schools. Table 3 shows the Chi-square test to establish whether there was a significant difference between the achieved sample and the national population of schools.

Table 2 – Senior leader survey responses before weighting

		Group		Total
		Sample	Population	
Primary-LowestQT	Count	178	3309	3487
	% within group	15.7%	16.1%	16.1%
Primary-2ndLowQT	Count	176	3202	3378
	% within group	15.5%	15.6%	15.6%
Primary-MidQT	Count	171	3240	3411
	% within group	15.0%	15.8%	15.7%
Primary-2ndHighQT	Count	177	3235	3412
	% within group	15.6%	15.7%	15.7%
Primary-HighestQT	Count	163	3165	3328
	% within group	14.3%	15.4%	15.3%
Primary-FSM missing	Count	26	1018	1044
	% within group	2.3%	5.0%	4.8%
Secondary-LowestQT	Count	60	629	689
	% within group	5.3%	3.1%	3.2%
Secondary-2ndLowQT	Count	44	634	678
	% within group	3.9%	3.1%	3.1%
Secondary-MidQT	Count	46	625	671
	% within group	4.0%	3.0%	3.1%
Secondary-2ndHighQT	Count	47	619	666
	% within group	4.1%	3.0%	3.1%

Secondary-HighestQT	Count	31	597	628
	% within group	2.7%	2.9%	2.9%
Secondary-FSM missing	Count	6	115	121
	% within group	0.5%	0.6%	0.6%
All-through Schools	Count	12	165	177
	% within group	1.1%	0.8%	0.8%
Total	Count	1137	20553	21690
	% within group	100.0%	100.0%	100.0%

Table 3 – Chi-square test of representativeness for the senior leader survey responses

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-square	44.930 ^a	12	.000
Likelihood ratio	45.064	12	.000
Linear-by-linear association	4.659	1	.031
N of valid cases	21690		

The above analysis identifies that weighting was necessary to ensure the sample of responding senior leaders came from schools that matched the population distribution. Following the calculation of sample weights, the distribution of the representativeness variable was re-run to ensure it matched the population of schools. Table 4 is that distribution.

Table 4 – Senior leader survey responses after weighting

		Group		Total
		Sample	Population	
Primary-LowestQT	Count	199	3309	3508
	% within group	16.1%	16.1%	16.1%
Primary-2ndLowQT	Count	192	3202	3394
	% within group	15.6%	15.6%	15.6%
Primary-MidQT	Count	194	3240	3434
	% within group	15.7%	15.8%	15.8%
Primary-2ndHighQT	Count	194	3235	3429
	% within group	15.7%	15.7%	15.7%

Primary-HighestQT	Count	190	3165	3355
	% within group	15.4%	15.4%	15.4%
Primary-FSM missing	Count	61	1018	1079
	% within group	4.9%	5.0%	5.0%
Secondary-LowestQT	Count	38	629	667
	% within group	3.1%	3.1%	3.1%
Secondary-2ndLowQT	Count	38	634	672
	% within group	3.1%	3.1%	3.1%
Secondary-MidQT	Count	37	625	662
	% within group	3.0%	3.0%	3.0%
Secondary-2ndHighQT	Count	37	619	656
	% within group	3.0%	3.0%	3.0%
Secondary-HighestQT	Count	36	597	633
	% within group	2.9%	2.9%	2.9%
Secondary-FSM missing	Count	7	115	122
	% within group	0.6%	0.6%	0.6%
All-through Schools	Count	10	165	175
	% within group	0.8%	0.8%	0.8%
Total	Count	1233	20553	21786
	% within group	100.0%	100.0%	100.0%

Table 5 – Chi-square test of representativeness for the senior leader survey responses

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-square	.014 ^a	12	1.000
Likelihood ratio	.014	12	1.000
Linear-by-linear association	.000	1	.996
N of valid cases	21786		

The same process was carried out on the respondents to the teacher survey and Tables 6 and 7 show the resulting distributions. There were 1821 respondents to the teacher survey who came from 1266 primary and secondary schools, with 78 per cent of schools having a single respondent and a further 14 per cent having two respondents.

Table 6 – Teacher survey responses before weighting

		Group		Total
		Sample	Population	
Primary-LowestQT	Count	210 _a	3309 _b	3519
	% within group	11.5%	16.1%	15.7%
Primary-2ndLowQT	Count	172 _a	3202 _b	3374
	% within group	9.4%	15.6%	15.1%
Primary-MidQT	Count	197 _a	3240 _b	3437
	% within group	10.8%	15.8%	15.4%
Primary-2ndHighQT	Count	203 _a	3235 _b	3438
	% within group	11.1%	15.7%	15.4%
Primary-HighestQT	Count	194 _a	3165 _b	3359
	% within group	10.7%	15.4%	15.0%
Primary-FSM missing	Count	29 _a	1018 _b	1047
	% within group	1.6%	5.0%	4.7%
Secondary-LowestQT	Count	195 _a	629 _b	824
	% within group	10.7%	3.1%	3.7%
Secondary-2ndLowQT	Count	161 _a	634 _b	795
	% within group	8.8%	3.1%	3.6%
Secondary-MidQT	Count	190 _a	625 _b	815
	% within group	10.4%	3.0%	3.6%
Secondary-2ndHighQT	Count	126 _a	619 _b	745
	% within group	6.9%	3.0%	3.3%
Secondary-HighestQT	Count	95 _a	597 _b	692
	% within group	5.2%	2.9%	3.1%
Secondary-FSM missing	Count	14 _a	115 _a	129
	% within group	0.8%	0.6%	0.6%
All-through Schools	Count	35 _a	165 _b	200
	% within group	1.9%	0.8%	0.9%
Total	Count	1821	20553	22374
	% within group	100.0%	100.0%	100.0%

Each subscript letter denotes a subset of group categories whose column proportions do not differ significantly from each other at the .05 level.

Table 7 – Chi-square test of representativeness for the teacher survey responses

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-square	981.997 ^a	12	.000
Likelihood ratio	782.897	12	.000
Linear-by-linear association	491.834	1	.000
N of valid cases	22374		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.50.

Table 8 – Teacher survey responses after weighting

		Group		Total
		Sample	Population	
Primary-LowestQT	Count	293	3309	3602
	% within group	16.1%	16.1%	16.1%
Primary-2ndLowQT	Count	284	3202	3486
	% within group	15.6%	15.6%	15.6%
Primary-MidQT	Count	287	3240	3527
	% within group	15.8%	15.8%	15.8%
Primary-2ndHighQT	Count	287	3235	3522
	% within group	15.8%	15.7%	15.7%
Primary-HighestQT	Count	280	3165	3445
	% within group	15.4%	15.4%	15.4%
Primary-FSM missing	Count	90	1018	1108
	% within group	4.9%	5.0%	5.0%
Secondary-LowestQT	Count	56	629	685
	% within group	3.1%	3.1%	3.1%
Secondary-2ndLowQT	Count	56	634	690
	% within group	3.1%	3.1%	3.1%
Secondary-MidQT	Count	55	625	680
	% within group	3.0%	3.0%	3.0%
Secondary-2ndHighQT	Count	55	619	674
	% within group	3.0%	3.0%	3.0%
Secondary-HighestQT	Count	53	597	650
	% within group	2.9%	2.9%	2.9%

Secondary-FSM missing	Count	10	115	125
	% within group	0.5%	0.6%	0.6%
All-through Schools	Count	15	165	180
	% within group	0.8%	0.8%	0.8%
Total	Count	1821	20553	22374
	% within group	100.0%	100.0%	100.0%

Table 9 – Chi-square test of representativeness for the teacher survey responses

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-square	.019 ^a	12	1.000
Likelihood ratio	.019	12	1.000
Linear-by-linear association	.000	1	.993
N of valid cases	22374		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.17.

Analysis

A range of descriptive analyses were carried out on the survey responses, with all questions being analysed by the following school-level characteristics: FSM quintiles, school phase of primary or secondary, region, and academy status (either academy or maintained). For the majority of questions, cross-tabulations were carried out with a corresponding test for independence. Where tables were greater than 2x2, a Bonferroni adjustment (Bonferroni, 1936) was applied to all analyses to identify which column cells were significantly different from each other. Non-respondents and missing data were omitted from the analysis on a question by question basis so all analysis is based on valid percentages. All descriptive analysis was carried out in SPSS v24 and weights were applied to all analyses.

Questions were collapsed as appropriate where cell counts were too low for reliable analysis.

Questions resulting in continuous scales were analysed using a one-way anova.

Regression analysis

Outcome measures

To understand the association between a range of school-level characteristics and survey responses, regression analysis was run on a number of survey outcomes.

For senior leaders, analysis was run on questions that identified current levels of job satisfaction (SL_Q27), the manageability of their current working hours (SL_Q22), and how prepared they felt if schools were to reopen (SL_Q31). The questions on preparedness (SL_Q31) are a bank of questions, and analysis was undertaken to determine if these questions could be combined to create a single ‘preparedness’ measure (totprepare). After investigation and discussions within the research team, it was decided to maintain a single composite with all items included. A reliability analysis was run and a Cronbachs Alpha⁴ of 0.91 was achieved. Only cases with valid responses on all questions were included in this analysis. This resulted in responses from 1041 respondents being available for analysis.

For the teacher survey responses, analysis was run for the questions on levels of job satisfaction (T_Q31), and manageability of working hours (T_Q27). The proportion of pupils who returned the last piece of set work (T_Q11) was used as a continuous outcome measure. An aim of the survey was to understand the extent to which disadvantaged pupils were engaging with home learning activities. To determine this, use was made of two questions in the teacher survey: T_Q11 which identified the level of engagement for the teacher’s class, and T_Q15a2 which identified whether pupils eligible for the Pupil Premium were engaged more or less than their classmates. Both variables were coded into categorical variables⁵. The resulting cross-tabulation highlighted teachers that had identified pupils eligible for the Pupil Premium who were in schools that had a higher level of overall engagement and had engaged at the same level, or higher, than their classmates. The relevant cells of interest are coloured red in the table below. This was further recoded into a dichotomous variable (ppengaged) which identified the extent to which pupils eligible for the Pupil Premium were engaged in learning activities⁶.

⁴ Cronbach’s Alpha is a measure of internal consistency. Values above 0.8 generally indicate high levels of consistency.

⁵ T_Q11 and the proportion of pupils engaged in the last activity set was coded into the following (0 thru 24=1)(24.01 thru 41=2)(41.01 thru 66=3)(66.01 thru high=4). T_Q15 and the extent to which pupils eligible for the Pupil Premium were engaging in comparison to their classmates was coded into the following (1 thru 5=1)(6 thru 10=2)(11=3)(12 thru high=4).

⁶ The creation of this variable is from teachers’ perceptions about the pupils in their class. It does not identify individual pupil engagement or the extent and quality of that engagement.

Table 10 – Levels of engagement

Level of class engagement		Pupils eligible for Pupil Premium doing more or less work than classmates				Total
		A lot less	Less	The same	More	
Lowest 25%	Count	116	97	93	44	350
	Col %	35.8%	21.0%	25.0%	18.3%	25.0%
2nd Lowest 25%	Count	104	131	69	47	351
	Col %	32.1%	28.4%	18.5%	19.5%	25.1%
2nd Highest 25%	Count	61	139	88	67	355
	Col %	18.8%	30.1%	23.7%	27.8%	25.4%
Highest 25%	Count	43	95	122	83	343
	Col %	13.3%	20.6%	32.8%	34.4%	24.5%
Total	Count	324	462	372	241	1399
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%

A dichotomous outcome variable was created from the above table where the cells in bold red were coded into 1 and all others coded into 0. This outcome measure would have been suitable for logistic regression analysis.

Three types of regression modelling were undertaken on the senior leader and teacher survey responses. The questions on manageability (SL_Q22 and T_Q27) and satisfaction (SL_Q27 and T_Q31) were ordinal measures and so ordinal regression models were used. The senior leader measure for ‘preparedness’ (totprepare) and the teacher question on levels of engagement (T_Q11) are continuous measures so normal OLS regression was used. The dichotomous variable created to identify the extent to which pupils eligible for the Pupil Premium were engaging in school work (ppengaged) was analysed using logistic regression.

Models using senior leader data were carried out in SPSS v24 and teacher models were run in STATA-15.

Explanatory variables

- Free school meal (FSM) eligibility (middle quintile set as default)
- Region (London set as default)
- Academy status (maintained set as default)
- Ofsted rating (good set as default)
- Rural/urban (rural set as default)

- Phase (primary set as default).

Also included in all models were two respondent characteristics:

- Gender (male set as default)
- Age (40-49 set as default).

Each model additionally had a number of specific questions from the survey. These were:

Senior leaders – manageability model (SL_Q22)

- SL_Q23 – questions relating to the factors creating pressure (4 and 5=1)(else=0)⁷
- SL_Q24 – questions relating to sources of support (4,5,6=1)(else=0).

Senior leaders – satisfaction model (SL_Q27)

- SL_Q23 – questions relating to the factors creating pressure (4 and 5=1)(else=0)
- SL_Q24 – questions relating to sources of support (4,5,6=1)(else=0)
- SL_Q26 – questions relating to the level of control felt by senior leaders on aspects of their role (4,5=1)(else=0).

Senior leaders – preparedness model (totprepare)

- SL_Q 28a – percentage of FTE currently available for work
- SL_Q28b_1 – percentage of current capacity available to work at home
- SL_Q28b_2 – percentage of current capacity available to work at school
- SL_Q29 – difficulties experienced pre-shut down.

Teachers – manageability model (T_Q27)

- T_Q28 – questions relating to factors creating pressure (4 and 5=1)(else=0)
- T_Q29 – questions relating to sources of support (support score) (4, 5 and 6=1)(else=0)
- T_Q34 – year group taught (0-1 variables)
- T_Q33 – subject taught (secondary schools only, 0-1 variables).

⁷ Contents within parentheses identify the recoding of the question response categories into dichotomous explanatory variables.

Teachers – satisfaction model (T_Q22)

- T_Q28 – questions relating to factors creating pressure (4 and 5=1)(else=0)
- T_Q29 – questions relating to sources of support (4, 5 and 6=1)(else=0)
- T_Q30 – questions relating to the level of control felt by teachers on aspects of their role (4 and 5=1)(else=0).

Teachers – engagement model (T_Q11) and Pupil Premium engagement model (ppengaged)

- T_Q3 – tools used to communicate with pupils and parents
- T_Q4 – tools used to deliver learning content
- T_Q5 – teacher’s ability to support remote learning (4 and 5=1, else=0)
- T_Q7 – impact of Covid-19 on provision before shut down
- T_Q9 – what was the last assignment set since lockdown? (option 11 no set work = 0)
- T_Q13 – percentage of pupils with whom teacher is in regular contact
- T_Q17 – percentage of parents/carers engaged with learning at home
- T_Q 18 – curriculum areas not covered (2 dummy variables for those that ticked 1 and those that ticked 2).

Final model outputs

Senior leaders – manageability model (SL_Q22)

Table 11 shows the frequencies of senior leaders’ responses on the dependent variable (manageability of working hours). As this is an ordinal measure, an ordinal regression model was used to determine the association between a range of explanatory variables and the dependent variable.

Table 11 – SL_Q22 How manageable do you find the hours you are currently working?

		Frequency	Percent	Valid percent	Cumulative percent
	1 Completely unmanageable	68	5.5	6.4	6.4
	2 Mostly unmanageable	188	15.2	17.7	24.1
	3 Somewhat manageable	351	28.5	33.0	57.0
	4 Mostly manageable	300	24.3	28.2	85.2
	5 Completely manageable	157	12.7	14.8	100.0
	Total	1064	86.3	100.0	
Missing	-99 No response	169	13.7		
Total		1233	100.0		

Table 12 – Final senior leader manageability model⁸

Model parameter estimates								
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence interval	
							Lower bound	Upper bound
Threshold	[SL_Q22 = 1]	-4.417	0.536	67.865	1	0.000	-5.468	-3.366
	[SL_Q22 = 2]	-2.676	0.522	26.243	1	0.000	-3.700	-1.652
	[SL_Q22 = 3]	-0.949	0.517	3.368	1	0.066	-1.962	0.065
	[SL_Q22 = 4]	0.790	0.517	2.331	1	0.127	-0.224	1.803
ofsted19	1 Inadequate/Requires improvement	-0.005	0.184	0.001	1	0.978	-0.366	0.356
	2 Outstanding	-0.145	0.176	0.684	1	0.408	-0.489	0.199
	99 Missing	-0.408	0.525	0.606	1	0.436	-1.436	0.620

⁸ All models were initially run with all explanatory variables as described in the text. Due to convergence and interpretation issues some variables that had a p value of > 0.2 were removed before the final run. Therefore variables listed in the text but not in the final model were removed due to this criteria.

	100 Good (reference)	0 ^a			0			
Attainment Quintile (ovks24att)	1 Lowest 20%	0.072	0.197	0.135	1	0.713	-0.313	0.458
	2 2nd Lowest 20%	0.186	0.192	0.938	1	0.333	-0.191	0.563
	4 2nd Highest 20%	-0.139	0.185	0.563	1	0.453	-0.502	0.224
	5 Highest 20%	-0.171	0.203	0.705	1	0.401	-0.569	0.228
	99 Missing	0.052	0.251	0.044	1	0.835	-0.439	0.544
	100 Middle 20% (reference)	0 ^a			0			
Region	1 East Midlands	0.110	0.265	0.173	1	0.678	-0.409	0.629
	2 East of England	-0.110	0.246	0.201	1	0.654	-0.592	0.371
	4 North East	0.375	0.355	1.113	1	0.291	-0.322	1.072
	5 North West	0.277	0.229	1.465	1	0.226	-0.171	0.725
	6 South East	0.350	0.231	2.285	1	0.131	-0.104	0.803
	7 South West	0.030	0.261	0.013	1	0.908	-0.481	0.541
	8 West Midlands	-0.008	0.253	0.001	1	0.976	-0.504	0.489
	9 Yorkshire and the Humber	0.401	0.266	2.278	1	0.131	-0.120	0.921
	100 London (reference)	0 ^a			0			
School type (schtype)	0 Secondary	0.170	0.169	1.011	1	0.315	-0.162	0.502
	1 Primary (reference)	0 ^a			0			
Primary/Secondary Combined FSM Quintile (fsmallquin)	1 Lowest 20%	-0.096	0.198	0.235	1	0.627	-0.483	0.291
	2 2nd Lowest 20%	-0.064	0.191	0.114	1	0.735	-0.438	0.309
	4 2nd Highest 20%	0.222	0.189	1.383	1	0.240	-0.148	0.592
	5 Highest 20%	0.025	0.199	0.016	1	0.900	-0.364	0.414
	99 Missing	0.496	0.316	2.464	1	0.117	-0.123	1.115
	100 Middle 20% (reference)	0 ^a			0			
Academy (acad)	0 Academy	-0.165	0.168	0.958	1	0.328	-0.494	0.165
	1 Maintained school	0 ^a			0			
	0	-0.502	0.126	15.902	1	0.000	-0.748	-0.255

After 10 May ⁹	1	0 ^a			0			
SL_Q23_1 - Interactions with parents	-99 Missing/Routed away	-1.205	0.580	4.312	1	0.038	-2.342	-0.068
	0 To a large/Very large extent	-0.294	0.158	3.475	1	0.062	-0.602	0.015
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_2 - Directives from government	-99 Missing/Routed away	-0.146	0.623	0.055	1	0.815	-1.367	1.076
	0 To a large/Very large extent	-0.272	0.143	3.616	1	0.057	-0.552	0.008
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_4 - Additional responsibilities (e.g. providing welfare support for vulnerable pupils not in school)	-99 Missing/Routed away	-1.603	0.816	3.862	1	0.049	-3.202	-0.004
	0 To a large/Very large extent	-0.618	0.129	22.952	1	0.000	-0.871	-0.365
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_5 - Difficulties staffing the school	-99 Missing/Routed away	0.869	1.066	0.665	1	0.415	-1.220	2.957
	0 To a large/Very large extent	-0.395	0.153	6.618	1	0.010	-0.695	-0.094
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_6 - Difficulties enabling remote learning	-99 Missing/Routed away	-0.063	0.559	0.013	1	0.910	-1.159	1.033
	0 To a large/Very large extent	-0.242	0.149	2.625	1	0.105	-0.534	0.051
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_8 - Concerns about opening the school more fully in future	-99 Missing/Routed away	-0.347	1.429	0.059	1	0.808	-3.148	2.454
	0 To a large/Very large extent	-0.451	0.185	5.978	1	0.014	-0.813	-0.090
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_10 - Working from home	-99 Missing/Routed away	-0.075	0.691	0.012	1	0.914	-1.428	1.279
	0 To a large/Very large extent	-0.559	0.141	15.817	1	0.000	-0.835	-0.284
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
	-99 Missing/Routed away	0.482	0.586	0.678	1	0.410	-0.666	1.630

⁹ Because senior leaders and teachers were answering questions over a ten-day period, some responses pre-dated the Prime Minister's announcement (on the opening of schools to more pupils) on 10 May, and the publication of DfE guidance from 12 to 25 May (DfE 2020a-d).

SL_Q23_11 - Parenting my own young children	0 To a large/Very large extent	-0.763	0.151	25.605	1	0.000	-1.058	-0.467
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_12 - Other personal concerns (e.g. illness, bereavement, caring for own relatives)	-99 Missing/Routed away	-0.395	0.561	0.495	1	0.482	-1.495	0.705
	0 To a large/Very large extent	-0.310	0.137	5.158	1	0.023	-0.578	-0.042
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q24_1- MAT senior leaders	-99 Missing/Routed away/I have not received this support	0.441	0.320	1.900	1	0.168	-0.186	1.068
	0 Moderately/Very/Extremely helpful	0.553	0.314	3.096	1	0.079	-0.063	1.169
	1 Not at all/Not very helpful	0 ^a			0			
SL_Q24_2 - LA services	-99 Missing/Routed away/I have not received this support	0.171	0.211	0.661	1	0.416	-0.242	0.584
	0 Moderately/Very/Extremely helpful	0.283	0.142	3.956	1	0.047	0.004	0.561
	1 Not at all/Not very helpful	0 ^a			0			
SL_Q24_4 - Senior leaders from other schools	-99 Missing/Routed away/I have not received this support	-0.169	0.272	0.383	1	0.536	-0.703	0.365
	0 Moderately/Very/Extremely helpful	-0.542	0.252	4.622	1	0.032	-1.036	-0.048
	1 Not at all/Not very helpful	0 ^a			0			
SL_Q38__T_Q36 How old are you?	-99 Unknown	0.306	0.601	0.259	1	0.611	-0.872	1.484
	1 20 – 29 years	0.794	1.072	0.549	1	0.459	-1.307	2.895
	2 30 – 39 years	-0.011	0.182	0.003	1	0.953	-0.367	0.345
	4 50 – 59 years	0.375	0.138	7.449	1	0.006	0.106	0.645
	5 60 + years	0.174	0.289	0.362	1	0.548	-0.393	0.741
	100 40 - 49 years (reference)	0 ^a			0			
SL_Q37__T_Q35 Are you...?	-99 Unknown	0.231	0.664	0.121	1	0.728	-1.070	1.531
	0 Female	-0.102	0.137	0.548	1	0.459	-0.371	0.168
	1 Male	0 ^a			0			

Link function: Logit.

a. This parameter was set to zero because it is redundant.

Senior leaders – Satisfaction model (SL_Q27)

The dependent variable, frequencies below, is an ordinal measure so an ordinal regression model was used to determine the association between a range of explanatory variables and the dependent variable.

Table 13 – SL_Q27 Overall, how satisfied or dissatisfied are you with your job at the moment?

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1 Not at all satisfied	95	7.7	9.1	9.1
	2 Not satisfied	222	18.0	21.2	30.2
	3 Somewhat satisfied	351	28.5	33.5	63.7
	4 Satisfied	314	25.5	30.0	93.7
	5 Completely satisfied	66	5.4	6.3	100.0
	Total	1048	85.0	100.0	
Missing	-99 No response	185	15.0		
Total		1233	100.0		

Table 14 – Final senior leader satisfaction model

Model parameter estimates								
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence interval	
							Lower bound	Upper bound
SL_Q27 Overall, how satisfied are you?	1 Not at all satisfied	-2.242	0.456	24.157	1	0.000	-3.136	-1.348
	2 Not satisfied	-0.590	0.450	1.723	1	0.189	-1.471	0.291
	3 Somewhat satisfied	1.092	0.450	5.879	1	0.015	0.209	1.974
	4 Satisfied	3.484	0.466	55.928	1	0.000	2.571	4.398
ofsted19	1 Inadequate/Requires improvement	-0.105	0.185	0.323	1	0.570	-0.467	0.257
	2 Outstanding	-0.181	0.179	1.021	1	0.312	-0.532	0.170
	99 Missing	0.274	0.530	0.267	1	0.605	-0.765	1.313
	100 Good (reference)	0 ^a			0			
Attainment Quintile (ovks24att)	1 Lowest 20%	0.435	0.200	4.745	1	0.029	0.044	0.827
	2 2nd Lowest 20%	0.247	0.196	1.598	1	0.206	-0.136	0.631
	4 2nd Highest 20%	0.084	0.186	0.203	1	0.653	-0.281	0.449
	5 Highest 20%	0.090	0.207	0.191	1	0.662	-0.315	0.496
	99 Missing	-0.023	0.252	0.008	1	0.927	-0.516	0.470
	100 Middle 20% (reference)	0 ^a			0			
Region	1 East Midlands	-0.459	0.267	2.951	1	0.086	-0.982	0.065
	2 East of England	-0.084	0.249	0.113	1	0.737	-0.572	0.405
	4 North East	-0.186	0.352	0.280	1	0.596	-0.876	0.503
	5 North West	-0.017	0.232	0.005	1	0.942	-0.471	0.437
	6 South East	-0.099	0.234	0.180	1	0.671	-0.558	0.359
	7 South West	-0.308	0.266	1.338	1	0.247	-0.830	0.214
	8 West Midlands	-0.212	0.258	0.674	1	0.412	-0.717	0.294
	9 Yorkshire and the Humber	0.297	0.270	1.203	1	0.273	-0.233	0.827
	100 London (reference)	0 ^a			0			
School Type (sctype)	0 Secondary	0.341	0.213	2.559	1	0.110	-0.077	0.759
	1 Primary (reference)	0 ^a			0			
Primary/Secondary Combined FSM Quintile (fsmallquin)	1 Lowest 20%	-0.270	0.199	1.838	1	0.175	-0.661	0.120
	2 2nd Lowest 20%	-0.147	0.194	0.576	1	0.448	-0.527	0.233
	4 2nd Highest 20%	-0.141	0.191	0.551	1	0.458	-0.515	0.232
	5 Highest 20%	-0.319	0.198	2.585	1	0.108	-0.707	0.070
	99 Missing	-0.197	0.320	0.377	1	0.539	-0.825	0.431
	100 Middle 20% (reference)	0 ^a			0			
Academy (acad)	0 Academy	0.088	0.171	0.267	1	0.605	-0.246	0.422
	1 Maintained school	0 ^a			0			
After 10 May	0	-0.499	0.126	15.735	1	0.000	-0.746	-0.252
	1	0 ^a			0			
SL_Q23_2 - Directives from government	-99 Missing/Routed away	0.194	0.625	0.096	1	0.757	-1.031	1.418

	0 To a large/Very large extent	-0.400	0.141	8.050	1	0.005	-0.677	-0.124
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_7 - Being held responsible for estimating pupils' examination grades	-99 Missing/Routed away	0 ^a			0			
	0 To a large/Very large extent	0.272	0.279	0.950	1	0.330	-0.275	0.819
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_9 - Health and well-being of my staff	-99 Missing/Routed away	0.195	0.688	0.081	1	0.777	-1.153	1.543
	0 To a large/Very large extent	-0.369	0.147	6.282	1	0.012	-0.658	-0.081
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_10 - Working from home	-99 Missing/Routed away	-0.063	0.689	0.008	1	0.927	-1.413	1.286
	0 To a large/Very large extent	-0.722	0.132	30.036	1	0.000	-0.980	-0.464
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q23_12 - Other personal concerns (e.g. illness, bereavement, caring for own relatives)	-99 Missing/Routed away	-0.061	0.556	0.012	1	0.912	-1.152	1.029
	0 To a large/Very large extent	-0.479	0.138	11.992	1	0.001	-0.750	-0.208
	1 To a moderate/Small extent/Not at all/NA	0 ^a			0			
SL_Q24_1 - MAT senior leaders	-99 Missing/Routed away/I have not received this support	0.756	0.321	5.551	1	0.018	0.127	1.385
	0 Moderately/Very/Extremely helpful	1.162	0.315	13.587	1	0.000	0.544	1.779
	1 Not at all/Not very helpful	0 ^a			0			
SL_Q24_2 - LA services	-99 Missing/Routed away/I have not received this support	0.051	0.202	0.065	1	0.799	-0.344	0.447
	0 Moderately/Very/Extremely helpful	0.318	0.141	5.115	1	0.024	0.042	0.594
	1 Not at all/Not very helpful	0 ^a			0			
SL_Q26_1 - Ensuring that curriculum coverage is appropriate	-99 Missing	1.697	1.596	1.131	1	0.288	-1.431	4.826
	0 Agree/Strongly agree	0.487	0.153	10.134	1	0.001	0.187	0.786
	1 Strongly disagree/Disagree/Mixed views	0 ^a			0			
SL_Q26_2 - Ensuring that teaching and	-99 Missing	-1.020	0.791	1.661	1	0.197	-2.570	0.531
	0 Agree/Strongly agree	0.508	0.152	11.104	1	0.001	0.209	0.806

learning approaches are appropriate	1 Strongly disagree/ Disagree/Mixed views	0 ^a			0			
SL_Q26_4 - Ensuring that all pupils have access to learning	-99 Missing	0.662	0.911	0.527	1	0.468	-1.124	2.447
	0 Agree/Strongly agree	0.375	0.126	8.883	1	0.003	0.128	0.622
	1 Strongly disagree/ Disagree/Mixed views	0 ^a			0			
SL_Q38__T_Q36 How old are you?	-99 Unknown	-0.351	0.600	0.342	1	0.559	-1.527	0.825
	1 20 – 29 years	-1.140	1.086	1.102	1	0.294	-3.269	0.989
	2 30 – 39 years	0.079	0.182	0.186	1	0.666	-0.278	0.435
	4 50 – 59 years	0.045	0.133	0.116	1	0.733	-0.216	0.306
	5 60 + years	-0.188	0.286	0.432	1	0.511	-0.747	0.372
	100 40 - 49 years (reference)	0 ^a			0			
SL_Q37__T_Q35 Are you...?	-99 Unknown	-0.031	0.717	0.002	1	0.966	-1.437	1.375
	0 Female	-0.102	0.137	0.559	1	0.455	-0.371	0.166
	1 Male	0 ^a			0			

a. This parameter is set to zero because it is redundant.

Senior leaders – Preparedness model (totprepare)

The dependent variable, frequencies below, is a continuous measure so an OLS regression model was used to determine the association between a range of explanatory variables and the dependent variable. The adjusted R-squared for this model is 0.08.

Table 15 – Distribution of ‘totprepare’ (unweighted)

		Frequency	Percent	Valid percent	Cumulative percent
Valid	12	20	1.6	1.9	1.9
	13	12	1.0	1.2	3.1
	14	16	1.3	1.5	4.6
	15	9	.7	.9	5.5
	16	10	.8	1.0	6.4
	17	13	1.1	1.2	7.7
	18	14	1.1	1.3	9.0
	19	24	1.9	2.3	11.3
	20	29	2.4	2.8	14.1
	21	30	2.4	2.9	17.0
	22	30	2.4	2.9	19.9
	23	36	2.9	3.5	23.3
	24	43	3.5	4.1	27.5
	25	38	3.1	3.7	31.1
	26	54	4.4	5.2	36.3
	27	49	4.0	4.7	41.0
	28	43	3.5	4.1	45.1
	29	39	3.2	3.7	48.9
	30	58	4.7	5.6	54.5
	31	54	4.4	5.2	59.7
32	53	4.3	5.1	64.7	
33	53	4.3	5.1	69.8	
34	52	4.2	5.0	74.8	
35	42	3.4	4.0	78.9	
36	56	4.5	5.4	84.2	
37	31	2.5	3.0	87.2	
38	27	2.2	2.6	89.8	
39	22	1.8	2.1	91.9	
40	15	1.2	1.4	93.4	

	41	13	1.1	1.2	94.6
	42	12	1.0	1.2	95.8
	43	14	1.1	1.3	97.1
	44	7	.6	.7	97.8
	45	7	.6	.7	98.5
	46	3	.2	.3	98.8
	47	2	.2	.2	98.9
	48	3	.2	.3	99.2
	49	1	.1	.1	99.3
	50	3	.2	.3	99.6
	52	1	.1	.1	99.7
	53	2	.2	.2	99.9
	56	1	.1	.1	100.0
	Total	1041	84.4	100.0	
Missing	System	192	15.6		
Total		1233	100.0		

Table 16 – Final model outcomes for totprepare

Model co-efficients ^{a,b}							
Model	Unstandardised co-efficients		Standardised co-efficients	t	Sig.	95.0% Confidence interval for B	
	B	Std. Error	Beta			Lower bound	Upper bound
(Constant)	24.236	1.857		13.054	0.000	20.592	27.879
Ofsted19_1 ofsted19=Inadequate/Requires improvement	-0.047	0.755	-0.002	-0.063	0.950	-1.528	1.434
Ofsted19_2 ofsted19=Outstanding	-1.083	0.740	-0.050	-1.464	0.144	-2.536	0.369
Ofsted19_3 ofsted19=Missing	-3.302	2.170	-0.057	-1.521	0.128	-7.561	0.957
Attainment quintile=Lowest 20%	0.255	0.816	0.013	0.313	0.754	-1.347	1.857
Attainment quintile=2nd Lowest 20%	0.626	0.801	0.030	0.782	0.434	-0.945	2.198
Attainment quintile=2nd Highest 20%	0.396	0.768	0.020	0.515	0.606	-1.112	1.904
Attainment quintile=Highest 20%	1.404	0.855	0.066	1.642	0.101	-0.274	3.082
Attainment quintile=Missing	2.630	1.037	0.093	2.537	0.011	0.595	4.664

Region_11 region=East Midlands	1.708	1.096	0.066	1.558	0.119	-0.443	3.858
Region_12 region=East of England	0.729	1.042	0.031	0.700	0.484	-1.316	2.774
Region_13 region=North East	0.508	1.461	0.012	0.348	0.728	-2.360	3.376
Region_14 region=North West	-1.615	0.962	-0.076	-1.679	0.093	-3.502	0.272
Region_15 region=South East	0.425	0.970	0.021	0.438	0.661	-1.479	2.330
Region_16 region=South West	1.510	1.096	0.058	1.377	0.169	-0.642	3.661
Region_17 region=West Midlands	0.939	1.082	0.035	0.867	0.386	-1.185	3.062
Region_18 region=Yorkshire and the Humber	-0.486	1.105	-0.018	-0.440	0.660	-2.653	1.682
School type (schtype)	1.272	0.695	0.062	1.830	0.067	-0.092	2.636
FSM quintile=Lowest 20%	2.054	0.814	0.105	2.524	0.012	0.457	3.652
FSM quintile=2nd Lowest 20%	-0.131	0.793	-0.006	-0.165	0.869	-1.687	1.426
FSM quintile=2nd Highest 20%	1.621	0.787	0.080	2.060	0.040	0.077	3.165
FSM quintile=Highest 20%	2.148	0.822	0.106	2.612	0.009	0.534	3.761
FSM quintile=Missing	0.879	1.298	0.027	0.677	0.498	-1.668	3.427
Academy	-0.345	0.567	-0.021	-0.609	0.543	-1.458	0.768
After 10 May	0.014	0.483	0.001	0.029	0.977	-0.934	0.962
SL_Q28a What proportion of your FTE teaching capacity is currently available for work? (%)	0.065	0.016	0.150	4.169	0.000	0.035	0.096
SL_Q28b_1 What proportion of this FTE teaching capacity is currently available to work from home only? (%)	-0.038	0.013	-0.106	-2.950	0.003	-0.063	-0.013
SL_Q29_3 - We had insufficient teachers to provide pupils with the normal standard of teaching	-1.403	0.540	-0.084	-2.597	0.010	-2.463	-0.343
SL_Q29_4 - We had insufficient catering staff to run a school meal service	1.636	1.047	0.048	1.562	0.119	-0.419	3.691
SL_Q29_6 What impact did this have on your school? - We had insufficient facilities staff to keep the school clean	-1.638	0.793	-0.066	-2.067	0.039	-3.194	-0.083
How old are you?=20 – 29 years	-0.838	4.397	-0.006	-0.191	0.8	-9.467	7.790

How old are you?=30 – 39 years	-0.345	0.742	-0.015	-0.464	0.643	-1.801	1.112
How old are you?=50 – 59 years	0.569	0.546	0.035	1.042	0.298	-0.503	1.641
How old are you?=60 + years	-0.820	1.176	-0.022	-0.697	0.486	-3.128	1.489
How old are you?=99.0	-1.862	2.476	-0.034	-0.752	0.452	-6.721	2.997
Your gender=Female	-0.546	0.566	-0.031	-0.965	0.335	-1.656	0.564
Your gender=99.0	1.094	3.095	0.016	0.353	0.724	-4.980	7.168

- a. Dependent variable: totprepare
- b. Weighted least squares regression - Weighted by wt

Teacher – Manageability model (T_Q27)

The dependent variable, frequencies below, is an ordinal measure so an ordinal regression model was used to determine the association between a range of explanatory variables and the dependent variable.

Table 17 T_Q27 – How manageable do you find the hours you are currently working?

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Completely unmanageable	60	3.3	3.6	3.6
	Mostly unmanageable	165	9.1	10.0	13.6
	Somewhat manageable	397	21.8	23.9	37.5
	Mostly manageable	479	26.3	28.9	66.4
	Completely manageable	557	30.6	33.6	100.0
	Total	1658	91.1	100.0	
Missing	No response	163	8.9		
Total		1821	100.0		

Table 18 – Final model outcomes for teacher manageability model

Variables	(1) Model coefficient	(2) Coefficient standard error	(3) p-value
How manageable do you find the hours you are currently working?	.	(.)	.
ofsted19_grouped = 1, Outstanding	0.003	(0.168)	0.987
ofsted19_grouped = 3, Requires improvement or inadequate	0.007	(0.179)	0.969
ofsted19_grouped = 5, Not known	-0.063	(0.819)	0.939
School type = 2, Secondary	-0.180	(0.556)	0.747
Attainment quintile = 1, Attainment quintile 1 (Low)	-0.096	(0.193)	0.618
Attainment quintile = 2, Attainment quintile 2	0.071	(0.185)	0.700
Attainment quintile = 4, Attainment quintile 4	0.086	(0.183)	0.637
Attainment quintile = 5, Attainment quintile 5 (High)	-0.030	(0.204)	0.885
Attainment quintile = 6, Not known	-0.103	(0.265)	0.698
Primary/Secondary Combined FSM Quintile = 1, Lowest 20%	0.155	(0.183)	0.395
Primary/Secondary Combined FSM Quintile = 2, 2nd Lowest 20%	0.102	(0.186)	0.584
Primary/Secondary Combined FSM Quintile = 4, 2nd Highest 20%	0.270	(0.175)	0.124
Primary/Secondary Combined FSM Quintile = 5, Highest 20%	0.490***	(0.185)	0.008
Primary/Secondary Combined FSM Quintile = 6, Missing	-0.364	(0.346)	0.293
Region = 1, East Midlands	-0.048	(0.224)	0.830
Region = 2, East of England	0.040	(0.212)	0.851
Region = 4, North East	0.453	(0.278)	0.103
Region = 5, North West	0.213	(0.224)	0.342
Region = 6, South East	0.080	(0.205)	0.695
Region = 7, South West	0.070	(0.213)	0.744
Region = 8, West Midlands	0.327	(0.235)	0.164
Region = 9, Yorkshire and the Humber	0.376	(0.243)	0.122
acad = 1, Academy	0.019	(0.119)	0.872
Pressures - Interactions with parents = 1, Large or very large extent	-0.421**	(0.171)	0.014
Pressures - Interactions with parents = 2, Missing	-1.442	(0.925)	0.119

Pressures - Additional responsibilities (e.g. providing welfare support for vulnerable) = 1, Large or very large extent	-0.701***	(0.206)	0.001
Pressures - Additional responsibilities (e.g. providing welfare support for vulnerable) = 2, Missing	2.043***	(0.578)	0.000
Pressures - Difficulties enabling remote learning = 1, Large or very large extent	-0.196	(0.137)	0.151
Pressures - Difficulties enabling remote learning = 2, Missing	-1.527***	(0.536)	0.004
Pressures - Working from home = 1, Large or very large extent	-0.942***	(0.155)	0.000
Pressures - Working from home = 2, Missing	-0.852*	(0.481)	0.077
Pressures - Parenting my own young children = 1, Large or very large extent	-0.855***	(0.143)	0.000
Pressures - Parenting my own young children = 2, Missing	0.424	(0.398)	0.287
Pressures - Other personal concerns (e.g. illness, bereavement, caring for partner) = 1, Large or very large extent	-0.307**	(0.144)	0.033
Pressures - Other personal concerns (e.g. illness, bereavement, caring for partner) = 2, Missing	0.390	(0.499)	0.435
Support from - Senior leaders from my school = 1, Helpful	0.298	(0.192)	0.120
Support from - Senior leaders from my school = 2, No response	-0.045	(0.274)	0.869
Support from - My colleagues/peers = 1, Helpful	1.062***	(0.404)	0.009
Support from - My colleagues/peers = 2, No response	1.911***	(0.476)	0.000
Support from - My union = 1, Helpful	-0.283	(0.173)	0.102
Support from - My union = 2, No response	-0.225	(0.173)	0.192
Tools - Emails/texts	0.245*	(0.132)	0.062
Tools - Telephone/video calls home	-0.243**	(0.119)	0.042
Age group = 1, 20-29 years	0.860***	(0.216)	0.000
Age group = 2, 30-39 years	-0.202	(0.132)	0.127
Age group = 4, 50-59 years	0.086	(0.155)	0.577
Age group = 5, 60+ years	0.106	(0.273)	0.698
Age group = 6, Prefer not to say	-0.183	(0.611)	0.764
Gender = 1, Female	-0.352**	(0.138)	0.011
Gender = 2, Not known	-0.973**	(0.408)	0.017
Year group – KS1	0.042	(0.135)	0.753
Year group – KS3/4	-0.622	(0.603)	0.302

Year group – KS5	-0.105	(0.153)	0.494
Year group – Unknown	-0.110	(0.843)	0.896
WSubject = 1, Science and ICT	0.694	(0.522)	0.184
WSubject = 2, Creative arts and DT	0.481	(0.527)	0.361
WSubject = 4, English	0.875	(0.540)	0.105
WSubject = 5, Humanities	0.594	(0.526)	0.259
WSubject = 6, Maths	0.602	(0.532)	0.258
WSubject = 8, Other subjects	0.592	(0.514)	0.249
Surveyed before or after 10 May = 1, After	-0.183*	(0.111)	0.099
/cut1	-3.372***	(0.566)	0.000
/cut2	-1.811***	(0.537)	0.001
/cut3	-0.163	(0.534)	0.760
/cut4	1.314**	(0.538)	0.015
*** p<0.01, ** p<0.05, * p<0.1			

Teacher – Satisfaction model (T_Q31)

The dependent variable, frequencies below, is an ordinal measure so an ordinal regression model was used to determine the association between a range of explanatory variables and the dependent variable.

Table 19 T_Q31 – Overall, how satisfied or dissatisfied are you with your job at the moment?

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Not at all satisfied	93	5.1	5.7	5.7
	Not satisfied	271	14.9	16.6	22.3
	Somewhat satisfied	640	35.1	39.1	61.3
	Satisfied	517	28.4	31.5	92.9
	Completely satisfied	117	6.4	7.1	100.0
	Total	1637	89.9	100.0	
Missing	No response	184	10.1		
Total		1821	100.0		

Table 20 – Final model outcomes for satisfaction model

Variables	(1)	(2)	(3)
	Model coefficient	Coefficient standard error	p-value
T_Q31	.	(.)	.
ofsted19_grouped = 1, Outstanding	0.011	(0.176)	0.951
ofsted19_grouped = 3, RI or inadequate	-0.098	(0.159)	0.538
ofsted19_grouped = 5, Not known	-1.281*	(0.730)	0.079
School type = 2, Secondary	0.132	(0.120)	0.269
Attainment quintile = 1, Attainment quintile 1 (Low)	-0.275	(0.187)	0.141
Attainment quintile = 2, Attainment quintile 2	0.102	(0.186)	0.583
Attainment quintile = 4, Attainment quintile 4	-0.033	(0.186)	0.858
Attainment quintile = 5, Attainment quintile 5 (High)	0.237	(0.202)	0.240
Attainment quintile = 6, Not known	0.277	(0.252)	0.271
Primary/Secondary Combined FSM Quintile = 1, Lowest 20%	-0.081	(0.205)	0.692
Primary/Secondary Combined FSM Quintile = 2, 2nd Lowest 20%	0.013	(0.190)	0.947
Primary/Secondary Combined FSM Quintile = 4, 2nd Highest 20%	-0.022	(0.189)	0.908
Primary/Secondary Combined FSM Quintile = 5, Highest 20%	0.175	(0.199)	0.380
Primary/Secondary Combined FSM Quintile = 6, Missing	0.318	(0.319)	0.319
Region = 1, East Midlands	0.020	(0.237)	0.934
Region = 2, East of England	0.627***	(0.223)	0.005
Region = 4, North East	0.187	(0.274)	0.494
Region = 5, North West	0.144	(0.236)	0.541
Region = 6, South East	0.357	(0.224)	0.112
Region = 7, South West	0.103	(0.242)	0.671
Region = 8, West Midlands	0.501*	(0.265)	0.059
Region = 9, Yorkshire and the Humber	0.466*	(0.260)	0.073
acad = 1, Academy	0.050	(0.126)	0.691
Pressures - Safeguarding issues /concern for pupils = 1, Large or very large extent	-0.575***	(0.207)	0.005
Pressures - Safeguarding issues /concern for pupils = 2, Missing	1.030	(0.663)	0.121
Pressures - Difficulties supporting pupilsbremote learning = 1, Large or very large extent	-0.383**	(0.167)	0.022
Pressures - Difficulties supporting pupilsbremote learning = 2, Missing	-0.127	(0.517)	0.806
Pressures - Difficulties enabling remote learning = 1, Large or very large extent	-0.344*	(0.187)	0.067
Pressures - Difficulties enabling remote learning = 2, Missing	-0.114	(0.483)	0.813
Pressures - Working from home = 1, Large or very large extent	-0.472***	(0.155)	0.002

Pressures - Working from home = 2, Missing	-1.112**	(0.513)	0.030
Pressures - Parenting my own young children = 1, Large or very large extent	-0.240*	(0.145)	0.099
Pressures - Parenting my own young children = 2, Missing	-0.290	(0.260)	0.264
Pressures - Other personal concerns (e.g. illness, bereavement, caring for partner) = 1, Large or very large extent	-0.387***	(0.144)	0.007
Pressures - Other personal concerns (e.g. illness, bereavement, caring for partner) = 2, Missing	0.080	(0.345)	0.816
Support from - Senior leaders from my school = 1, Helpful	1.153***	(0.203)	0.000
Support from - Senior leaders from my school = 2, No response	0.374	(0.304)	0.219
Support from - Local forums/partnerships = 1, Helpful	0.561**	(0.244)	0.021
Support from - Local forums/partnerships = 2, No response	0.360	(0.220)	0.103
Support from - My colleagues/peers = 1, Helpful	0.778**	(0.393)	0.048
Support from - My colleagues/peers = 2, No response	0.868*	(0.474)	0.067
Control - Determining learning content = 1, Agree	0.252*	(0.147)	0.086
Control - Determining learning content = 3, No response	1.178	(1.862)	0.527
Control - Selecting teaching and learning methods = 1, Agree	0.570***	(0.138)	0.000
Control - Selecting teaching and learning methods = 3, No response	-0.269	(0.841)	0.749
Control - Ensuring all my pupils have access to learning = 1, Agree	0.738***	(0.139)	0.000
Control - Ensuring all my pupils have access to learning = 3, No response	0.377	(1.055)	0.721
Control - Determining the amount of work assigned to pupils = 1, Agree	0.171	(0.126)	0.176
Control - Determining the amount of work assigned to pupils = 3, No response	1.293	(1.397)	0.355
Age Group = 1, 20-29 years	0.167	(0.188)	0.374
Age Group = 2, 30-39 years	-0.020	(0.142)	0.888
Age Group = 4, 50-59 years	-0.199	(0.158)	0.208
Age Group = 5, 60+ years	0.072	(0.288)	0.803
Age Group = 6, Prefer not to say	-0.073	(0.474)	0.878
Gender = 1, Female	-0.224	(0.143)	0.116
Gender = 2, Not known	0.635	(0.458)	0.165
Surveyed before or after 10 May = 1, After	-0.258**	(0.112)	0.021
/cut1	-0.922*	(0.548)	0.092
/cut2	0.912*	(0.543)	0.093
/cut3	3.045***	(0.547)	0.000
/cut4	5.448***	(0.563)	0.000
*** p<0.01, ** p<0.05, * p<0.1			

Teacher – Engagement model (T_Q11)

The dependent variable, frequencies below, is a continuous measure so an OLS regression model was used to determine the association between a range of explanatory variables and the dependent variable. The R-squared for this model is 0.247

Table 21 – Distribution of T_Q11 (unweighted)

		Frequency	Percent	Valid percent	Cumulative percent
Valid	0	21	1.2	1.4	1.4
	1	2	.1	.1	1.6
	2	10	.5	.7	2.3
	3	11	.6	.8	3.0
	4	12	.7	.8	3.8
	5	14	.8	1.0	4.8
	6	15	.8	1.0	5.8
	7	10	.5	.7	6.5
	8	5	.3	.3	6.8
	9	16	.9	1.1	7.9
	10	54	3.0	3.7	11.6
	11	15	.8	1.0	12.7
	12	5	.3	.3	13.0
	13	6	.3	.4	13.4
	14	12	.7	.8	14.2
	15	32	1.8	2.2	16.4
	16	16	.9	1.1	17.5
	17	12	.7	.8	18.3
	18	4	.2	.3	18.6
	19	10	.5	.7	19.3
	20	52	2.9	3.6	22.8
	21	13	.7	.9	23.7
	22	7	.4	.5	24.2
	23	10	.5	.7	24.9
	24	5	.3	.3	25.2
	25	25	1.4	1.7	26.9
	26	15	.8	1.0	28.0
	27	12	.7	.8	28.8
	28	15	.8	1.0	29.8
29	6	.3	.4	30.2	

30	89	4.9	6.1	36.3
31	14	.8	1.0	37.3
32	8	.4	.5	37.8
33	16	.9	1.1	38.9
34	15	.8	1.0	39.9
35	22	1.2	1.5	41.5
36	13	.7	.9	42.3
37	7	.4	.5	42.8
38	14	.8	1.0	43.8
39	15	.8	1.0	44.8
40	63	3.5	4.3	49.1
41	13	.7	.9	50.0
42	6	.3	.4	50.4
43	11	.6	.8	51.2
44	6	.3	.4	51.6
45	13	.7	.9	52.5
46	6	.3	.4	52.9
47	12	.7	.8	53.7
48	4	.2	.3	54.0
49	14	.8	1.0	54.9
50	71	3.9	4.9	59.8
51	18	1.0	1.2	61.0
52	8	.4	.5	61.6
53	7	.4	.5	62.0
54	4	.2	.3	62.3
55	14	.8	1.0	63.3
56	13	.7	.9	64.2
57	6	.3	.4	64.6
58	7	.4	.5	65.0
59	12	.7	.8	65.9
60	52	2.9	3.6	69.4
61	16	.9	1.1	70.5
62	11	.6	.8	71.3
63	11	.6	.8	72.0
64	14	.8	1.0	73.0
65	22	1.2	1.5	74.5
66	10	.5	.7	75.2
67	2	.1	.1	75.3

	68	8	.4	.5	75.9
	69	19	1.0	1.3	77.2
	70	50	2.7	3.4	80.6
	71	15	.8	1.0	81.6
	72	9	.5	.6	82.2
	73	8	.4	.5	82.8
	74	14	.8	1.0	83.7
	75	26	1.4	1.8	85.5
	76	8	.4	.5	86.0
	77	10	.5	.7	86.7
	78	7	.4	.5	87.2
	79	8	.4	.5	87.8
	80	40	2.2	2.7	90.5
	81	10	.5	.7	91.2
	82	8	.4	.5	91.7
	83	7	.4	.5	92.2
	84	10	.5	.7	92.9
	85	19	1.0	1.3	94.2
	86	5	.3	.3	94.5
	87	3	.2	.2	94.7
	88	9	.5	.6	95.3
	89	8	.4	.5	95.9
	90	22	1.2	1.5	97.4
	91	8	.4	.5	97.9
	92	1	.1	.1	98.0
	93	8	.4	.5	98.6
	94	7	.4	.5	99.0
	95	3	.2	.2	99.2
	96	1	.1	.1	99.3
	97	3	.2	.2	99.5
	98	2	.1	.1	99.7
	99	1	.1	.1	99.7
	100	4	.2	.3	100.0
	Total	1462	80.3	100.0	
Missing	System	359	19.7		
Total		1821	100.0		

Table 22 – Final engagement model outcomes

	(1)	(2)	(3)
	Indicate the approximate percentage of pupils that returned work to you		
Variables	Model coefficient	Coefficient standard error	p-value
Indicate the approximate percentage of pupils that returned work to you	.	.	.
ofsted19_grouped = 1, Outstanding	-0.052	2.391	0.983
ofsted19_grouped = 3, RI or inadequate	0.087	2.159	0.968
ofsted19_grouped = 5, Not known	18.005**	7.383	0.015
School type = 2, Secondary	-1.642	4.354	0.706
Attainment quintile = 1, Attainment quintile 1 (Low)	-5.738**	2.562	0.025
Attainment quintile = 2, Attainment quintile 2	-4.861**	2.407	0.044
Attainment quintile = 4, Attainment quintile 4	-1.701	2.603	0.514
Attainment quintile = 5, Attainment quintile 5 (High)	2.647	2.844	0.352
Attainment quintile = 6, Not known	-3.152	3.918	0.421
Primary/Secondary Combined FSM Quintile = 1, Lowest 20%	-0.092	2.598	0.972
Primary/Secondary Combined FSM Quintile = 2, 2nd Lowest 20%	-1.673	2.543	0.511
Primary/Secondary Combined FSM Quintile = 4, 2nd Highest 20%	-4.278*	2.366	0.071
Primary/Secondary Combined FSM Quintile = 5, Highest 20%	-13.086***	2.421	0.000
Primary/Secondary Combined FSM Quintile = 6, Missing	-11.168**	4.976	0.025
Region = 1, East Midlands	-2.442	3.574	0.495

Region = 2, East of England	-1.239	3.380	0.714
Region = 4, North East	-5.233	4.078	0.200
Region = 5, North West	-0.373	3.353	0.911
Region = 6, South East	-0.217	3.285	0.947
Region = 7, South West	-0.537	3.430	0.876
Region = 8, West Midlands	-7.844**	3.805	0.039
Region = 9, Yorkshire and the Humber	-3.414	3.513	0.331
acad = 1, Academy	3.580**	1.553	0.021
Tools - The school virtual learning environment	8.135***	1.760	0.000
Tools - The school website	-5.043***	1.771	0.004
Tools - Telephone/video calls home	3.194**	1.554	0.040
Tools - Other	7.118***	2.014	0.000
Learning content - Videos of lessons you have produced	3.323*	1.871	0.076
Learning content - Online conversations (e.g. between you and pupils)	4.507***	1.724	0.009
Teacher ability - The level of support from your school = 1, Good	4.163**	1.996	0.037
Teacher ability- The level of support from your school = 2, Not known	16.603*	9.719	0.088
Teacher ability - The hardware/equipment provided by your school = 1, Good	3.122*	1.777	0.079
Teacher ability- The hardware/equipment provided by your school = 2, Not known	-2.470	2.783	0.375
Teacher ability - The access to programmes/virtual learning environments provided = 1, Good	3.861*	2.046	0.059
Teacher ability - The access to programmes/virtual learning environments provided = 2, Not known	8.093	5.729	0.158
Most recent activity - Consolidate previous learning or revise	5.273***	1.484	0.000
Most recent activity - Learn about strategies for managing their own learning	4.770*	2.718	0.079

We had a significant drop in numbers of pupils attending school	-4.503***	1.582	0.004
Are there any areas of the curriculum you normally teach that are getting less attention? a = 1, Yes, all areas of the curriculum in general	-5.880**	2.528	0.020
Are there any areas of the curriculum you normally teach that are getting less attention? a = 2, Yes, certain areas of the curriculum	-0.748	2.269	0.742
Are there any areas of the curriculum you normally teach that are getting less attention? a = 4, Don't know/ no response	-3.584	3.209	0.264
Age Group = 1, 20-29 years	-5.254**	2.359	0.026
Age Group = 2, 30-39 years	-1.062	1.920	0.580
Age Group = 4, 50-59 years	-3.822*	2.108	0.070
Age Group = 5, 60+ years	4.089	4.523	0.366
Age Group = 6, Prefer not to say	-13.624**	5.437	0.012
Gender = 1, Female	-0.345	2.027	0.865
Gender = 2, Not known	16.881***	4.831	0.000
Year groups taught – KS1	-3.255*	1.867	0.081
Year groups taught – KS3/4	-1.148	6.671	0.863
Year groups taught – KS5	3.897**	1.931	0.044
Year groups taught -Unknown	-4.454	6.849	0.516
WSubject = 1, Science and ICT	1.358	6.349	0.831
WSubject = 2, Creative arts and DT	-8.495	6.439	0.187
WSubject = 4, English	-3.519	6.425	0.584
WSubject = 5, Humanities	0.428	6.393	0.947
WSubject = 6, Maths	5.827	6.369	0.360
WSubject = 8, Other subjects	-0.531	6.089	0.930
Constant	39.657***	5.282	0.000

*** p<0.01, ** p<0.05, * p<0.1

Teacher – Pupil Premium engagement model

The dependent variable, frequencies below, is a binary measure so a logistic regression model was used to determine the association between a range of explanatory variables and the dependent variable.

Table 23 – Distribution of Pupil Premium engagement measure (unweighted)

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Low	1102	60.5	75.4	75.4
	High	360	19.8	24.6	100.0
	Total	1462	80.3	100.0	
Missing	System	359	19.7		
Total		1821	100.0		

Table 24 – Final Pupil Premium engagement model outcomes

	(1)	(2)	(3)
	Level of Pupil Premium engagement		
Variables	Model coefficient	Coefficient standard error	p-value
Level of Pupil Premium engagement	.	(.)	.
ofsted19_grouped = 1, Outstanding	-0.001	(0.227)	0.995
ofsted19_grouped = 3, Requires improvement or inadequate	0.134	(0.249)	0.591
ofsted19_grouped = 5, Not known	1.012	(1.003)	0.313
School type = 2, Secondary	-0.127	(0.556)	0.820
Attainment quintile = 1, Attainment quintile 1 (Low)	-0.239	(0.299)	0.424
Attainment quintile = 2, Attainment quintile 2	-0.122	(0.275)	0.657
Attainment quintile = 4, Attainment quintile 4	-0.135	(0.276)	0.624

Attainment quintile = 5, Attainment quintile 5 (High)	0.343	(0.272)	0.207
Attainment quintile = 6, Not known	0.044	(0.421)	0.916
Primary/Secondary Combined FSM Quintile = 1, Lowest 20%	0.018	(0.260)	0.945
Primary/Secondary Combined FSM Quintile = 2, 2nd Lowest 20%	-0.386	(0.263)	0.142
Primary/Secondary Combined FSM Quintile = 4, 2nd Highest 20%	-0.367	(0.258)	0.155
Primary/Secondary Combined FSM Quintile = 5, Highest 20%	-0.734**	(0.301)	0.015
Primary/Secondary Combined FSM Quintile = 6, Missing	-0.373	(0.498)	0.454
Region = 1, East Midlands	-0.227	(0.353)	0.521
Region = 2, East of England	-0.296	(0.339)	0.382
Region = 4, North East	-0.294	(0.486)	0.545
Region = 5, North West	0.094	(0.343)	0.784
Region = 6, South East	-0.140	(0.322)	0.663
Region = 7, South West	-0.081	(0.342)	0.813
Region = 8, West Midlands	-0.168	(0.380)	0.659
Region = 9, Yorkshire and the Humber	-0.165	(0.355)	0.642
acad = 1, Academy	0.398**	(0.174)	0.022
Tools - The school virtual learning environment	0.743***	(0.280)	0.008
Tools - The school website	-0.501***	(0.183)	0.006
Tools - Telephone/video calls home	0.308*	(0.178)	0.084
Tools - Other	0.337	(0.224)	0.134
Learning content - The school virtual learning environment	-0.442*	(0.267)	0.097
Learning content - Online conversations (e.g. between you and pupils)	0.453**	(0.180)	0.012
Teacher ability - The hardware/equipment provided by your school = 1, Good	0.271	(0.178)	0.128
Teacher ability - The hardware/equipment provided by your school = 2, Not known	-0.268	(0.357)	0.454

Teacher ability - The quality of your working environment at home (i.e. no distractions) = 1, Good	0.437***	(0.165)	0.008
Teacher ability - The quality of your working environment at home (i.e. no distractions) = 2, Not known	3.043**	(1.468)	0.038
We had a significant drop in numbers of pupils attending school	-0.253	(0.171)	0.140
Most recent activity - Read a book	-0.192	(0.189)	0.311
Most recent activity - Consolidate previous learning or revise	0.383**	(0.165)	0.020
Most recent activity - Work collaboratively with other pupils	0.601	(0.406)	0.139
Most recent activity - Learn about strategies for managing their own learning	0.433*	(0.245)	0.077
Are there any areas of the curriculum you normally teach that are getting less attention? a = 1, Yes, all areas of the curriculum in general	-0.376	(0.259)	0.147
Are there any areas of the curriculum you normally teach that are getting less attention? a = 2, Yes, certain areas of the curriculum	-0.170	(0.218)	0.434
Are there any areas of the curriculum you normally teach that are getting less attention? a = 4, Don't know/ no response	-0.083	(0.373)	0.824
Age Group = 1, 20-29 years	-0.786***	(0.290)	0.007
Age Group = 2, 30-39 years	-0.041	(0.199)	0.838
Age Group = 4, 50-59 years	-0.415*	(0.241)	0.085
Age Group = 5, 60+ years	0.115	(0.471)	0.807
Age Group = 6, Prefer not to say	-3.694***	(1.306)	0.005
Gender = 1, Female	-0.049	(0.208)	0.813
Gender = 2, Not known	1.290**	(0.608)	0.034
Year groups taught - KS1	-0.355	(0.218)	0.103
Year groups taught – KS3/4	-0.498	(0.750)	0.507
Year groups taught – KS5	0.368*	(0.220)	0.095
Year groups taught - Unknown	2.098	(1.297)	0.106

WSubject = 1, Science and ICT	-0.377	(0.681)	0.580
WSubject = 2, Creative arts and DT	-0.270	(0.706)	0.702
WSubject = 4, English	-0.266	(0.708)	0.707
WSubject = 5, Humanities	-0.484	(0.706)	0.493
WSubject = 6, Maths	0.239	(0.689)	0.729
WSubject = 8, Other subjects	-0.338	(0.662)	0.609
Constant	-0.860	(0.537)	0.109

*** p<0.01, ** p<0.05, * p<0.1

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