



Department
for Education

Why teachers leave and return

Report on the feasibility study

December 2015

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Executive summary

In October 2014, the University of Nottingham was commissioned by the Department for Education (DfE) to undertake research on *Why Teachers Leave or Return*.

The first phase, from October 2014 to March 2015, was a pilot study to assess the feasibility of reaching leavers and returners via their schools, and of securing a sufficient response rate for surveys and interviews from them and their headteachers. It was also used to test and refine research instruments. The study had the endorsement of the major headteacher and teacher unions and associations in England¹.

The feasibility study included four tasks: i) literature review and design of survey and interview instruments; ii) sampling of survey schools; iii) pilot surveys; and iv) interviews of a sub-sample of headteachers, leavers and returners.

Response rates

A total of 83 schools out of 652 agreed to participate in the survey and 68 schools returned questionnaires, giving a response rate of 10%. The most significant barrier to extending the feasibility study into a full study was the very low response from leavers and returners: we received responses from only 7 leavers and 1 returner. In addition, secondary schools were under-represented in the responses compared with primary schools. The combination of low response rates and under-representation of secondary schools means that the results are unlikely to be representative of the school population as a whole.

Lessons from the pilot study

The existing methodology was dependent upon i) direct access to headteachers ii) their agreement to disseminate surveys within permitted timescales; iii) headteachers' knowledge of the contact details for the leavers; and iv) the willingness of the leavers and returners to respond within permitted timescales. If this approach had been successful it would have been cost-effective and comparatively quick in relation to other methods of carrying out the research. However, the study encountered three significant barriers: gaining access to these headteachers and other traditional 'gatekeepers'; workload pressures; and availability of contact details for those who had already left the profession. For future research in this area:

1. It is advisable to draw upon sampling strategies that facilitate direct access to leavers and returners rather than relying upon accessing headteachers and asking them to disseminate the surveys.

¹ ASCL, ATL, NAHT, NASUWT, NUT, along with SSAT and the Teacher Support Network

2. An alternative strategy would be to access a national database on teachers who have left the profession so that there could be direct invitations to potential participants (subject to data quality and data protection).
3. Failing this, it may be advisable to draw upon personal relations where possible by seeking the agreement of named individuals trusted by schools to disseminate the surveys.
4. If targeting leavers via schools, it is important to survey them while they are still employed (e.g. having resigned but still working their notice period). Asking headteachers to forward the survey to those who had already left the school was not successful because, at least in part, schools did not necessarily have their up-to-date contact details.
5. The pilot allowed 9 weeks for completion of the survey. A longer survey window could be considered.
6. The impact of resources might be maximised by targeting telephone and postal activity at those schools which data indicate are most likely to have leavers and returners.

Introduction

In October 2014 the University of Nottingham was commissioned by the Department for Education to undertake research on *Why Teachers Leave or Return*.

The first phase, in October 2014 to March 2015, was a pilot study to assess the feasibility of the methodology in securing a sufficient response rate from schools, leavers and returners, and test and refine research instruments. This report provides a summary of the methodology and outcomes of the pilot study.

Background and objectives of the study

The study aimed to collect robust evidence about the characteristics of teachers leaving and returning to the profession. It was designed to expand on the scope of a previous study, commissioned by DfE, on the reasons teachers leave the profession (Smithers and Robinson, 2003) by including teachers returning to the profession, measuring the perceived effectiveness of teachers leaving and returning, and updating the questionnaire to cover a wider range of factors that could influence teacher retention. The survey methodology was also modified, using online rather than postal data collection tools wherever possible.

The overall aims of the study were to:

- identify the reasons why teachers leave the profession, why some teachers return, and whether reasons vary between different groups of teachers and types of schools;
- identify the demographic and professional characteristics of teachers who leave and return, including their phase, specialism, and ITT route;
- assess the quality and effectiveness of teachers leaving and returning;
- ascertain the destinations of teachers leaving the profession and occupations of returning teachers whilst away from the profession;
- identify what challenges there are, if any, for teachers returning to the profession and for schools employing returning teachers; and,
- identify the relevant systemic and school level factors which are more likely to attract, retain or lose teachers.

The pilot study was carried out to assess the feasibility of reaching leavers and returners via their schools, and of securing a sufficient response rate from headteachers, leavers and returners. It was also used to test and refine the research instruments.

The purposes of the pilot were *threefold*:

- 1) to develop an evidence-informed research framework through a review of the literature;
- 2) to develop, test and refine interview and survey instruments;
- 3) to develop and test survey strategies which would generate an acceptable return of questionnaires for robust analyses.

These three purposes were achieved through *four* tasks:

- 1) literature review and design of survey and interview instruments;
- 2) sampling of survey schools;
- 3) pilot surveys; and
- 4) interviews.

Methodology of the pilot

1) Literature review

A comprehensive search for, and analysis of, previous research relevant to project goals was completed. Special attention was given to research carried out in schools in England but the review was not restricted to research in this context. This review of evidence was used to construct a framework from which both interview and survey instruments were developed, piloted and approved in January 2015.

Summary

The literature review identified two reasons why teachers leave and return to the profession and whether reasons and destinations vary between different groups of teachers and types of schools. First, there were push and pull factors in individual teachers' decisions to leave or return, including intrinsic motivation to teach, demographic characteristics and life stage of leavers and returners (e.g. age, gender, location, part-time/full-time, family commitments), their years of experience and subject in teaching, pathways into the profession, opportunities for career progression, and available alternatives to teaching (Johnson, 2004; Day et al., 2007; Gu & Day, 2007 & 2013; Day & Gu, 2010 & 2014; Passy and Golden, 2010).

Second, there were system-level factors (e.g. government policies, the wider economic situation, the perceived status of teachers) and school-level factors (e.g. school performance, school contexts, the quality and effectiveness of leadership and management) that may influence teachers' decisions to leave and/or return to teaching (e.g. Smithers and Robinson, 2003 & 2005; Ladd, 2009; Allen et al., 2012). The review also highlighted the significance of the nature and range of challenges that teachers experience in terms of sustaining their commitment and effectiveness in the profession

(Leithwood & Beatty, 2007; Leithwood et al., 2010; Day et al., 2011; Leithwood & Seashore-Louis, 2011; Sammons et al., 2014).

2) Sampling

Sampling strategies

A random sample of 652 schools was selected from Edubase and stratified to ensure it was representative of all schools in the three unitary authorities of Nottingham and Nottinghamshire, Derby and Derbyshire, and Coventry and Warwickshire on the basis of phase of education and type of establishment. See Appendix 1 for sampling methodology.

3) Pilot surveys

Survey strategies

A range of actions and strategies were used to encourage schools to respond to the survey.

1. *Splitting 652 schools into two groups:*

A letter about the pilot study was posted to 50% of the pilot schools (randomly selected) in the week commencing 17 November 2014. The purpose was to test whether this group was likely to respond to the survey request in the pilot phase.

The pilot found no evidence which suggested that this approach resulted in higher response rates.

2. *Emailing survey schools, followed by 3 email reminders, 2 postal reminders, 2 telephone reminders per school (on average) and 1 postcard 'appeal'*

3. *Publicity, endorsement and incentives*

- **Headteacher and teacher unions** (ASCL, ATL, NAHT, NASUWT, NUT), along with the Teacher Support Network and SSAT, were approached by letter and telephone and agreed to commit to supporting this research. They announced the pilot study in their newsletters and on their websites, encouraging their members who were contacted by the research team to participate in the surveys.
- The **Teacher Support Network** advertised this research on their Facebook page in late March 2015. The Facebook advert was viewed over 13,500 times, and their webpage about the research received nearly 400 views as a result. The Teacher Support Network believes that the regional targeting (i.e. the three specific counties in the Midlands) and prize offer that they featured in the advert (i.e. the subsidised Staff Engagement Survey offer) helped to achieve this

response. The large number of responses in the final week might be related to the perceived positive effect of this strategy.

- The research team also received support from the **teaching school (TS) networks**. The research was first announced in the national teaching school newsletter in March. Then the team promoted this research at a regional teaching school network event and strongly encouraged senior leaders of teaching schools in the East Midlands Teaching School Networks to support this research work.

Following a face-to-face conversation, the coordinator of the regional TS network encouraged members to support this research on Twitter. Senior leaders of 3 teaching schools in Nottinghamshire emailed their member schools about this research. Within 24 hours, 6 schools from one secondary led teaching school alliance offered to participate in this research.

Survey timing

Table 1 below provides a weekly summary of the survey activities including i) detailed timeline and method of survey invitations and reminders, and ii) the response rate from schools, leavers, returners and headteachers following each invitation/reminder.

The survey period was timed to include the resignation date (28 February 2015) when any teachers intending to leave their school by the end of term would have submitted their resignation but still be working in the school. The survey invitation also asked headteachers to forward questionnaires to any teachers who had left their school since September 2014...

Table 1: A weekly summary of the survey activities

Survey week/date	Contact activity	Responses from schools (number)	Completed surveys from leavers, returners and headteachers
Week 1: 26 Jan 2015	<ul style="list-style-type: none"> Initial email (652 schools) Letter to all local authorities in the pilot area 	Agreed ² : 4 Refusal: 1	Leavers: 0 Returners: 1 Headteachers: 0
Week 2: 2 Feb 2015	<ul style="list-style-type: none"> Follow up email (645 schools) Follow up letter (645 schools) 	Agreed: 6 Refusal: 0	Leavers: 0 Returners: 0 Headteachers: 0
Week 3: 9 Feb 2015	<ul style="list-style-type: none"> Telephone reminders (252 contacts with receptionist; 15 contacts with heads/SMT) Follow up letter (218 schools) 	Agreed: 15 Refusal: 20	Leavers: 1 Returners: 0 Headteachers: 2
Week 4: 16 Feb 2015	<ul style="list-style-type: none"> Telephone reminders (118 contacts with receptionist; 18 contacts with heads/SMT) (Half-term for all sample area except Derbyshire County) Follow up letter (353 schools) 	Agreed: 25 Refusal: 19	Leavers: 0 Returners: 0 Headteachers: 2
Week 5: 23 Feb 2015	<ul style="list-style-type: none"> Telephone reminders (82 contacts with receptionist; 3 contacts with heads/SMT) 	Agreed: 7 Refusal: 12	Leavers: 1 Returners: 0 Headteachers: 0
Week 6: 2 Mar 2015	<ul style="list-style-type: none"> Telephone reminders (127 contacts with receptionist; 6 contacts with heads/SMT) 	Agreed: 2 Refusal: 11	Leavers: 2 Returners: 0 Headteachers: 1
Week 7: 9 Mar 2015	<ul style="list-style-type: none"> Telephone reminders (32 contacts with receptionist; 8 contacts with heads/SMT) Postcards sent to 540 schools 73 letters sent to Teaching School Alliance (TSA) schools 	Agreed: 11 Refusal: 7	Leavers: 2 Returners: 0 Headteachers: 5
Week 8: 16 Mar 2015	<ul style="list-style-type: none"> Telephone reminders of schools that have agreed to participate but yet have not submitted their questionnaires 9 sets of questionnaires to schools that had agreed to participate in the surveys through TSA contacts 	Agreed: 7 Refusal: 1	Leavers: 1 Returners: 0 Headteachers: 4
Week 9: 23 Mar 2015	<ul style="list-style-type: none"> Third email reminder to all schools with outstanding responses Teacher Support Network publicised this research on their Facebook 	Agreed: 6 Refusal: 0	Leavers: 0 Returners: 0 Headteachers: 54
Total		Agreed: 83 Refusal: 71	Leavers: 7 Returners: 1 Headteachers: 68

The research team found that a more personal approach (e.g. through TS networks, the Teacher Support Network and telephone conversations with the headteachers) was more successful in persuading schools to participate in the research.

² “Agreed” indicates agreement from the headteacher to take part in the study by distributing questionnaires to any leavers and returners and completing a headteacher survey. Note that a small minority of schools who agreed to take part did not submit questionnaires.

Response rates

Summary of response rates

A total of 83 schools out of 652 agreed to participate in the survey (13% of those invited). A total of 68 schools returned a headteacher survey, giving a response rate of 10%.

All 34 headteachers who agreed to participate in the research and whose school had leavers and returners during the specified period (between September 2014 and March 2015) communicated to the research team that they would disseminate the questionnaires to leavers and/returners in their schools.

Table 2 below summarises the numbers of two types of schools that agreed to take part in the pilot survey: i) schools that had leavers and returners since September 2014; ii) schools that did not have leavers or returners during the same period; and iii) schools that declined the invitation to participate in this research. A lack of capacity appeared to have been the primary reason for their decision.

Table 2: Types of schools that agreed to participate in the pilot survey

Response	Primary	Secondary	Special Schools	Total no. of Schools
Schools that have leavers/returners and will take part	27	5	2	34
Schools that have no leavers/returners but will take part	47	0	2	49
Subtotal (all schools that agreed to take part)	74	5	4	83
Schools that did not want to take part	55	12	4	71
Schools that did not respond	397	71	30	498
Total	526	88	38	652

Amongst the 83 schools that agreed to participate in the pilot research, 68 headteachers, 7 leavers and 1 returner submitted completed questionnaires (Table 3). While paper questionnaires were available on request, the majority of questionnaires were completed online.

Table 3: Numbers of headteachers, leavers and returners who submitted partially completed and completed questionnaires.

	Headteacher	Leaver	Returner
Complete questionnaires	68	7	1
Partially completed questionnaires	13	9	1
Total	81	16	2

Assessment of non-completion

Across all surveys, once a respondent started a survey, non-completion was low. The Headteacher survey received only 13 partially completed questionnaires³. Of these, 8 went on to complete the Headteacher survey at a different point in time. Only 5 partially completed questionnaires were from individuals who did not go on to complete the survey. Of those, 1 did not answer any questions, 3 answered the first question only and 1 answered the first question on the number of leavers within a specified time frame (to which the answer was 0) and then answered the question on the number of returners and stopped. Overall, therefore, this positively highlights that once a headteacher made the decision to complete the survey they tended to complete it.

For the leavers survey, 9 partial responses were received. Of these, 7 were from just 2 schools. This could indicate that these were from the same leaver and therefore represented just 2 partial responses, but this is not known. Of the partial responses, only 3 answered the first question with no additional questions answered. Only 1 partial response was received from the returners survey with no questions answered. This suggests survey length was not the reason for the low response rate.

Headteacher survey responses: school characteristics

Tables 4-8 below summarise the characteristics of schools whose headteachers returned a completed questionnaire. With regard to the representativeness of these schools as compared to the characteristics of the school population (Appendix 2), these tables suggest that:

- schools from East Midlands were over-represented compared with schools from the West Midlands.

³ A partial survey response can be a completed survey where someone has forgotten to press submit or someone just clicking on the survey link and not answering any questions. Therefore if someone is testing if the link works before sharing with someone that can count as a partial response.

- primary schools were considerably over-represented compared with secondary schools in the total return.
- small schools were considerably over-represented compared with large schools in the total return.
- responses were broadly consistent by Free School Meal (FSM) band.
- schools that were judged by Ofsted as 'Requires Improvement' were marginally over-represented compared with other schools.

Table 4 Number of Headteacher survey responses by region

Region	Number of responses	% of responses	% of sample
East Midlands	60	88%	69%
West Midlands	8	12%	31%
Total	68	100%	100%

Table 5 Number of Headteacher survey responses by school size

Size of school	Number of responses	% of responses	% of sample
Small (100 pupils or less)	19	28%	19%
All others	48	72%	81%
Total	67⁴	100%	100%

Table 6 Number of Headteacher survey responses by phase

Phase of education	Number of responses	% of responses	% of sample
Primary	63	93%	81%
Not applicable	3	4%	6%
Secondary	2	3%	13%
Total	68	100%	100%

⁴ The total excludes schools for which information on size of school was not answered/missing.

Table 7 Number of Headteacher survey responses by percentage of pupils eligible for FSM

Percentage of pupils eligible for FSM	Number of responses	% of responses	% of sample
FSM Band 1 (0-8%)	18	29%	31%
FSM Band 2 (9-20%)	24	39%	33%
FSM Band 3 (21-35%)	12	19%	23%
FSM Band 4 (36% or more)	8	13%	13%
Total	62⁵	100%	100%

Table 8 Number of Headteacher survey responses by Ofsted score

Ofsted score	Number of responses	% of responses	% of sample
1: Outstanding	8	13%	15%
2: Good	35	56%	59%
3: Requires improvement	19	30%	22%
4: Inadequate	1	2%	4%
Total	63⁶	100%	100%

Headteachers' responses to the question on 'destination of leavers' suggested that, except for 3 teachers who either had taken early retirement or reached retirement age, the remaining leavers had moved to another state school. No teacher questionnaires were received from the group of greatest interest to the research, i.e. those who had left the state sector for reasons other than retirement.

Table 9 shows that across all four FSM eligibility groups a minority of schools reported they had either leavers or returners.

Table 10 shows a similar pattern in all four Ofsted categories, where only a minority of schools reported they had either a leaver or returner. However, proportionately more schools judged "requires improvement" reported having either a leaver or returner .

⁵ The total excludes schools for which information on FSM was not answered/missing.

⁶ The total excludes schools for which information on Ofsted score was not answered/missing.

Table 9 Whether school has leavers and returners split by number of pupils eligible for FSM

	Percentage of pupils eligible for FSM			
	0-8%	9-20%	21-35%	36% or more
School has no leavers or returners	15 (83%)	17 (71%)	7 (64%)	6 (75%)
School has either leavers or returners	3 (17%)	7 (29%)	4 (36%)	2 (25%)
Total	18 (100%)	24 (100%)	11⁷ (100%)	8 (100%)

Table 10 Whether school has leavers and returners split by Ofsted scores

	Ofsted score			
	1: Outstanding	2: Good	3: Requires Improvement	4: Inadequate
School has no leavers or returners	6 (75%)	29 (83%)	10 (56%)	1 (100%)
School has either leavers or returners	2 (25%)	6 (17%)	8 (44%)	0
Total	8 (100%)	35 (100%)	18⁸ (100%)	1 (100%)

⁷ The total excludes schools for which information on leavers and returners was not answered/missing.

⁸ The total excludes schools for which information on leavers and returners was not answered/missing.

Lessons from the pilot study

The existing methodology was dependent upon i) direct access to headteachers ii) their agreement to disseminate surveys within permitted timescales; iii) their knowledge of the contact details for the leavers; and iv) the willingness of the leavers and returners to respond within permitted timescales. If this approach had been successful it would have been cost-effective and comparatively quick in relation to other methods of carrying out the research. However, the study encountered three significant barriers: navigating access to these headteachers and other traditional 'gatekeepers'; their workload pressures; and availability of contact details for those who had already left the profession. The most significant barrier to extending the feasibility study into a full study was the very low responses from leavers and returners: we received responses from only 7 leavers and 1 returner. For future research in this area:

1. It is advisable to draw upon sampling strategies that facilitate direct access to leavers and returners rather than rely upon accessing headteachers and asking them to disseminate the surveys.
2. An alternative strategy would be to access a national database on teachers who have left the profession so that there could be direct invitations to potential participants (subject to data quality and data protection).
3. Failing this, it may be advisable to draw upon personal relations where possible by seeking the agreement of named individuals trusted by schools to disseminate the surveys.
4. If targeting leavers via schools, it is important to survey them while they are still employed (e.g. having resigned but still working their notice period). Asking headteachers to forward the survey to those who had already left the school was not successful because, at least in part, schools did not necessarily have their up-to-date contact details.
5. The pilot allowed 9 weeks for completion of the survey. A longer survey window could be considered.
6. The impact of resources might be maximised by targeting telephone and postal activity at those schools which data indicates are most likely to have leavers and returners...

References

Allen, R., Burgess, S. and Mayo, J. (2012) *The Teacher Labour Market, Teacher Turnover and Disadvantaged Schools: New Evidence for England*. Bristol: Centre for Market and Public Organisation.

Day, C. and Gu, Q. (2010) *The New Lives of Teachers*. Abingdon, Oxon: Routledge.

Day, C. and Gu, Q. (2014) *Resilient Teachers, Resilient Schools*. Abingdon, Oxon: Routledge.

Day, C., Sammons, P., Leithwood, K., Hopkins, D., Gu, Q. and Brown, E., with Ahtaridou, E. (2011) *Successful School Leadership: Linking with Learning and Achievement*. Open University Press.

Day, C., Sammons, P., Stobart, G., Kington, A. and Gu, Q. (2007) *Teachers Matter: Connecting Lives, Work and Effectiveness*. Maidenhead: Open University Press.

Gu, Q. and Day, C. (2007) Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education*, 23: 1302-1316.

Gu, Q. and Day, C. (2013) Challenges to teacher resilience: Conditions count. *British Educational Research Journal*, 39 (1): 22-44.

Johnson, S. M. (2004) *Finders and Keepers*. San Francisco, CA: Jossey-Bass.

Ladd, H. (2009). *Teachers' perceptions of their working conditions: How predictive of policy-relevant outcomes (National Center for Analysis of Longitudinal Data in Education Research Working Paper No. 33)*. Washington, DC: CALDER.

Leithwood, K. and Beatty, B. (2007) *Leading Teachers with Emotions in Mind*. Corwin Press.

Leithwood, K., Harris, A. and Strauss, T. (2010) *Leading School Turnaround*. San Francisco, CA: Jossey-Bass.

Leithwood, K. and Seashore-Louis, K. (2011) *Linking Leadership to Student Learning*. San Francisco, CA: Jossey-Bass.

Passy, R. and Golden, S. (2010) *Teacher Resignation and Recruitment Survey*. Slough: NFER.

Sammons, P., Davis, S., Day, C. and Gu, Q. (2014) Using mixed methods to investigate school improvement and the role of leadership: An example of a longitudinal study in England. *Journal of Educational Administration*, 52 (5): 565-589.

Smithers, A. and Robinson, P. (2003) *Factors Affecting Teachers' Decisions to Leave the Profession*. Research Report 430. London: Department for Education and Skills.

Smithers, A. and Robinson, P. (2005) Teacher Turnover, Wastage and Movements between Schools. Research Report 640. London: Department for Education and Skills.

Appendix 1: Sampling Methodology

The survey instruments were to be piloted within a random, stratified sample of 50% of all primary and secondary schools (N=652) in three shire counties in the Midlands:

Nottinghamshire and Nottingham City, Warwickshire and Coventry, and Derbyshire and Derby City. The decision to survey half of the whole population of schools took into account the potential low response rates from school-based surveys. The decision to use schools in three shire counties in the Midlands was to minimize the costs of travel for interviews with leavers, returners and headteachers. Schools due to open and already closed were excluded from the population prior to identification of the sample as well as those ineligible for inclusion in the research but contained within Edubase including independent schools, colleges and universities.

Comparison of the characteristics of the sample derived compared to the population against a broader set of variables indicates a high level of representativeness including FSM band, rural/urban split, school size and Ofsted rating (Appendix 2).

Sampling process

The following summarises the steps taken by the research team to generate the sample:

- Filter Edubase to identify all schools in the three unitary authorities for inclusion in the pilot of the research: Nottingham and Nottinghamshire, Derby and Derbyshire, and Coventry and Warwickshire.
- Exclude those ineligible for inclusion within the research on the basis of phase (nursery, 16 plus, all through and not applicable) and type of establishment (independent schools, colleges, universities and other types), as well as schools due to open and those already closed.
- Run descriptive statistical analysis of the characteristics and variability within the sample to inform data manipulation including the merging of fields where the base is too small for them to form standalone categories.
- Merge categories contained within phase to generate two distinct phases: i) primary (merged with middle deemed primary) and ii) secondary (merged with middle deemed secondary). Three categories were created for type of establishment: i) academies (merged with free schools as there were too few (n=11) for them to be a category within its own right); ii) LA maintained schools; and iii) special schools.
- Banding of continuous variables to form categorical data including FSM and school size.
- Identification of five sub-groups reflecting our two strata: i) primary academy; ii) secondary academy; iii) primary LA controlled; iv) secondary LA controlled; and v) special school.

— Random identification of 50% of all eligible schools using the statistical software package STATA.

Appendix 2: Characteristics of sampled schools

Type/Phase	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
Primary academy	111	9	56	9
Secondary academy	116	9	58	9
Primary LA controlled	939	72	470	72
Secondary LA controlled	59	5	30	5
Special schools	76	6	38	6
Total	1301		652	

FSM band – proportion of pupils eligible for FSM	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
FSM Band 1 (0-8%)	374	32	183	31
FSM Band 2 (9-20%)	378	32	195	33
FSM Band 3 (21-35%)	289	24	139	23
FSM Band 4 (36% or more)	142	12	75	13
Total	1183		592	

Region	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
East Midlands	946	73	453	69
West Midlands	355	27	199	31
Total	1301		652	

LA	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
Coventry	112	9	63	10
Derby	92	7	50	8
Derbyshire	417	32	218	33
Nottingham	94	7	42	6
Nottinghamshire	343	26	143	22
Warwickshire	243	19	136	21
Total	1301		652	

Urban/Rural	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
Hamlet and Isolated Dwelling	31	2	17	3
Town and Fringe	182	14	87	13
Urban > 10K	883	68	442	68
Village	205	16	106	16
Total	1301		652	

School size	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
Smaller than the national average school size	224	18	120	19
Greater than the national average school size	1029	82	509	81
Total	1253		629	

Ofsted_rating	Population: Frequency	Population: Percent	Sample: Frequency	Sample: Percent
1: Outstanding	184	16	86	15
2: Good	700	59	350	59
3: Requires improvement	258	22	133	22
4: Inadequate	42	4	24	4
Total	1184		593	



Department
for Education

© Department for Education (2015)

Reference: DFE-RR496

ISBN: 978-1-78105-547-2

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