

Millennium Cohort Study

MCS5: A guide to the Linked Education Administrative Datasets

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User guide to the data (First Edition)

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Centre for Longitudinal Studies

Following lives from birth through the adult years
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Background

The Millennium Cohort Study (MCS) is the fourth of Britain's world-renowned national longitudinal birth cohort studies.¹ Each follows a large sample of individuals, born over a specific period of time, through the course of their lives. They provide insight into trajectories/mobility over the life course (e.g. in weight, poverty, education) for the population as a whole, and also into how these movements vary across different sub-populations. They are also uniquely placed to allow for an understanding of the relationship between early life events and circumstances and outcomes later on in life.

The MCS provides detailed information on approximately 19,000 children born at the start of the new century and their families, across the United Kingdom. The cohort members were born, in England and Wales, over the 12 months period starting September 2000; in Scotland and Northern Ireland they were born over 13½ months from November 2000. The sample design allowed for disproportionate representation of families living in areas of child poverty, and in areas of England with high ethnic minority populations. Information was first collected from parents, through a home-based survey, when the cohort members were aged nine months. This first survey recorded, amongst other things, the circumstances of pregnancy and birth, as well as those of the early months of life, and the social and economic background of the children's families.

These multidisciplinary baseline data reveal the diversity of starting points from which the 'Children of the New Century' set out. Subsequent surveys have taken place at ages 3, 5, 7, 11 and 14 (ongoing at time of writing). These surveys coincide with important moments in children's lives, including the preschool period (age 3), and the start, middle and end of primary school (ages 5, 7, 11 respectively). From age 3 onwards, measured physical development and objective cognitive assessments have been carried out with children; surveys also include interviews with both parents (where co-resident), and, increasingly since age 7, with the cohort member. At age 7 (11), a postal survey of class teachers in all four countries took place.

Further details of the data available from the main survey are available from the CLS website and, in particular, the MCS Guide to the Datasets at www.cls.ioe.ac.uk/mcs.

¹The previous birth cohort studies, still ongoing, are the 1946 National Birth Cohort, the 1958 British Birth Cohort (also known as the National Child Development Study) and the 1970 British Cohort Study.

Consent to Education Data Linkage

During the fourth (age 7) sweep, the child's parent / carer was asked for consent to link the child's education records to their MCS survey data. Details of the consent form and the wording of the consent are reproduced in the MCS4 Technical Report, Appendices Section A16: consent form 3. Details of the response rates are available in the MCS4 Guide to the Education Linkage Dataset 2013.

Education Data Linkage

Education data have been successfully linked to the MCS. These are data collected from the Department for Education (DfE) in the form of the National Pupil Database (NPD). The NPD is an extremely rich dataset, containing data collected directly from schools, local authorities, and awarding bodies, alongside data from annual school censuses. Further information can be found at <https://www.gov.uk/government/collections/national-pupil-database>

Linking the NPD provides access to Key Stage 1 and 2 (KS1 and KS2), as well as Pupil Level Annual School Census (PLASC) data. KS1 and KS2 tests are undertaken in all state maintained schools in England, at ages 7 and 10 respectively. Further details can be found at <https://www.gov.uk/national-curriculum/key-stage-1-and-2>

The NPD KS1 data were previously linked to consented MCS participants using the Pupil Matching Reference (PMR). Further details of the data linkage methodology are contained in the MCS4 Guide to the Education Linkage Dataset 2013. Linked NPD data are available for a total of 7476 MCS participants from England. We note that this corresponds to a successful linkage rate of 88.5% amongst consenting participants.

We obtained permission from DfE to update the link to include KS2 data, for consented MCS participants.

Table 1: Participation, consent and linkage by sweep

| | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 |
|--|-------------|-------------|-------------|-------------|-------------|
| Number of participants resident in England, of those resident at MCS4 | 8502 | 8294 | 8583 | 9000 | 7896 |
| Number with valid consent, of those who consented at MCS4 | 7985 | 7810 | 8080 | 8448 | 7464 |
| Number with linked KS2 data, of those who consented at MCS4 | 7085 | 6927 | 7167 | 7476 | 6651 |

Notes: Consent to education data linkage was sought at MCS4. The number in MCS4 equals those with valid consent and successful KS2 linkage. Numbers in columns MCS1, MCS2, MCS3, MCS5 are those who provided valid consent at MCS4, whose KS2 data were successfully linked, *and* who were present in both the MCS4 survey and the column-specific survey.

Table 1, column “MCS4” row 1, shows the distribution of individuals who were resident in England during sweep 4, forming the universe of individuals whose NPD data it is possible to link. Subsequent rows show the number at MCS4 with valid consent to education record linkage (row 2), and with linked KS2 data (row 3). The other columns show the corresponding numbers, from amongst the MCS4 universe, available at other MCS sweeps.

Data variables

Table 2 lists the variables obtained from linkage to the National Pupil Database (NPD) or PLASC.

Table 2: Data Variables (England)

| Variable Name | Description | Source |
|------------------|---|--------|
| MCSID | MCS Research ID | CLS |
| MCSFLAG | Consented to Record Linkage or not | CLS |
| CMNUM | Cohort Member Number | CLS |
| CMSEX | CM Sex | CLS |
| CMPRES1 | Child present at MCS1 | CLS |
| CMPRES2 | Child present at MCS2 | CLS |
| CMPRES3 | Child present at MCS3 | CLS |
| CMPRES4 | Child present at MCS4 | CLS |
| CMPRES5 | Child present at MCS5 | CLS |
| CONSENT_EDUC | Consent to Educational Linkage (MCS4) | CLS |
| KS2_LEAANON | Anonymised LEA | CLS |
| KS2_SCHOOLANON | Anonymised School | CLS |
| KS2_LAESTAB | Anonymised LEA+SCHOOL | CLS |
| KS2_ACADYR | KS2 Academic Year | NPD |
| KS2_MONTHOFBIRTH | Month of birth | NPD |
| KS2_YEARGRP | Year Group of Pupil | NPD |
| KS2_GENDER | The gender of the pupil | NPD |
| KS2_NFTYPE | Institution type (see section 2.5.2) | NPD |
| KS2_MMSCH | Maintained mainstream school (including academies, excluding special schools) | NPD |

| Variable Name | Description | Source |
|-----------------|---|--------|
| KS2_MMSCH2 | Maintained mainstream school (excluding academies, excluding special schools) | NPD |
| KS2_MSCH | Maintained school (including academies, including special schools) | NPD |
| KS2_MSCH2 | Maintained school (excluding academies, including special schools) | NPD |
| KS2_OPEN_AC | Converter Academy: open date | NPD |
| KS2_TOE_CODE | Type of establishment code (see section 2.5.2) | NPD |
| KS2_AMDPUPIL | Type of pupil amendment | NPD |
| KS2_ENDKS | Pupil is at end of KS2 | NPD |
| KS2_EXAMYEAR_EN | English examination year | NPD |
| KS2_EXAMYEAR_MA | Maths examination year | NPD |
| KS2_SCHRES | Pupil included in School Results | NPD |
| KS2_LARES | Pupil included in LEA Results | NPD |
| KS2_NATRES | Pupil included in National Results | NPD |
| KS2_NATMTDRES | Pupil included in national (maintained) averages. | NPD |
| KS2_NPDDEN_LA | Pupil included in denominator for LA averages | NPD |
| KS2_NPDDEN_NAT | Pupil included in denominator for national averages | NPD |
| KS2_SCHRESTA | Pupil included in school results for TA calculations | NPD |
| KS2_LARESTA | Pupil included in LA results for TAs | NPD |
| KS2_NATRESTA | Pupil included in National results (all) for TAs | NPD |
| KS2_NATMTDRESTA | Pupil included in National results (MAINTAINED) for TAs | NPD |
| KS2_ELIGREAD | Pupil included in eligible pupil number for reading | NPD |
| KS2_ELIGREADTA | Pupil included in eligible pupil number for reading TA | NPD |
| KS2_ELIGWRIT | Pupil included in eligible pupil number for writing | NPD |
| KS2_ELIGWRITTA | Pupil included in eligible pupil number for writing TA | NPD |

| Variable Name | Description | Source |
|----------------------|--|---------------|
| KS2_ELIGENG | Pupil included in eligible pupil number for English | NPD |
| KS2_ELIGENGTA | Pupil included in the eligible pupil number for English TA | NPD |
| KS2_ELIGMAT | Pupil included in the eligible pupil number for Maths | NPD |
| KS2_ELIGMATTA | Pupil included in the eligible pupil number for Maths TA | NPD |
| KS2_ELIGENGLA | Pupil achieved eligible result in English for LA calcs | NPD |
| KS2_ELIGREADLA | Pupil achieved eligible result in Reading for LA calcs | NPD |
| KS2_ELIGWRITLA | Pupil achieved eligible result in Writing for LA calcs | NPD |
| KS2_ELIGMATLA | Pupil achieved eligible result in Maths for LA calcs | NPD |
| KS2_ELIGSCITA | Pupil included in the eligible pupil number for Science TA | NPD |
| KS2_VALENG | Pupil included in eligible pupil number for English (no missing) | NPD |
| KS2_VALENGTA | Pupil included in the eligible pupil number for English TA | NPD |
| KS2_VALREAD | Pupil included in the eligible pupil number for reading | NPD |
| KS2_VALREADTA | Pupil included in the eligible pupil number for reading TA | NPD |
| KS2_VALWRIT | Pupil included in the eligible pupil number for writing | NPD |
| KS2_VALWRITTA | Pupil included in the eligible pupil number for writing TA | NPD |
| KS2_VALMAT | Pupil included in eligible pupil number for maths (no missing) | NPD |
| KS2_VALMATTA | Pupil included in the eligible pupil number for Maths TA | NPD |
| KS2_VALSCITA | Pupil included in the eligible pupil number for Science TA | NPD |
| KS2_READLEVTA | Pupil included in the eligible pupil number for Reading Level TA | NPD |
| KS2_WRITLEVTA | Pupil included in the eligible pupil number for Writing Level TA | NPD |
| KS2_ENGTIER | English paper sat by pupil | NPD |
| KS2_ENGREADM RK | Marks achieved in English reading tests | NPD |
| KS2_ENGWRTMRK | Marks achieved in English writing test | NPD |

| Variable Name | Description | Source |
|-----------------|--|--------|
| KS2_ENGTOTMRK | Total marks achieved in English test | NPD |
| KS2_ENGREADLEV | Nat Curric level awarded for English reading test | NPD |
| KS2_ENGWRITELEV | Nat Curric level awarded for English writing test | NPD |
| KS2_ENGLEV | Nat Curric level awarded for English test | NPD |
| KS2_ENGLEVTA | National Curriculum level awarded for English Teacher Assessment. | NPD |
| KS2_ENGPOINTS | English attainment point score | NPD |
| KS2_ENGFINE | Finely graded level of English test | NPD |
| KS2_MATTIER | Maths paper sat by pupil | NPD |
| KS2_MATTESTAMRK | Marks achieved in test A of the maths test | NPD |
| KS2_MATTESTBMRK | Marks achieved in test B of the maths test | NPD |
| KS2_MATARTHMRK | Marks achieved in mental arithmetic test of maths test | NPD |
| KS2_MATTOTMRK | Total marks achieved in maths test (sum of A, B and mental arithmetic) | NPD |
| KS2_MATLEV | Nat Curric level awarded for maths test | NPD |
| KS2_MATLEVTA | National Curriculum level awarded for Maths Teacher Assessment. | NPD |
| KS2_MATPOINTS | Maths attainment point score | NPD |
| KS2_MATFINE | Finely graded level of maths test | NPD |
| KS2_SCILEVTA | National Curriculum level awarded for Science Teacher Assessment. | NPD |
| KS2_LEVLENG | Achieved level 2 or below in KS2 English | NPD |
| KS2_LEVLMAT | Achieved level 2 or below in KS2 maths | NPD |
| KS2_LEVLEMSTA | Achieved level 2 or below in KS2 English, maths and science TA | NPD |
| KS2_LEVXREAD | Achieved Level 4 or above (expected level) in KS2 English reading. | NPD |
| KS2_LEVXREADTA | Achieved Level 4 or above (expected level) in KS2 English reading TA | NPD |
| KS2_LEVXWRIT | Achieved Level 4 or above (expected level) in KS2 English writing. | NPD |

| Variable Name | Description | Source |
|-----------------|--|--------|
| KS2_LEVXWRITTA | Achieved Level 4 or above (expected level) in KS2 English writing TA | NPD |
| KS2_LEVXENG | Achieved level 4 or above in KS2 English | NPD |
| KS2_LEVXENGTA | Achieved Level 4 or above (expected level) in KS2 English TA. | NPD |
| KS2_LEVXMAT | Achieved level 4 or above in KS2 maths | NPD |
| KS2_LEVXMATTA | Achieved Level 4 or above (expected level) in KS2 Maths TA. | NPD |
| KS2_LEVXSCITA | Achieved Level 4 or above (expected level) in KS2 Science TA. | NPD |
| KS2_LEVXENGMAT | Achieved level 4 or below in KS2 English and maths | NPD |
| KS2_LEVXEMSTA | Achieved level 4 or above in KS2 English, maths and science TA | NPD |
| KS2_LEVAXREAD | Achieved Level 5 or above (expected level) in KS2 English reading. | NPD |
| KS2_LEVAXREADTA | Achieved Level 5 or above (expected level) in KS2 English reading TA | NPD |
| KS2_LEVAXWRIT | Achieved Level 5 or above (expected level) in KS2 English writing. | NPD |
| KS2_LEVAXWRITTA | Achieved Level 5 or above (expected level) in KS2 English writing TA | NPD |
| KS2_LEVAXENG | Achieved level 5 or above in KS2 English | NPD |
| KS2_LEVAXENGTA | Achieved Level 5 (above expected level) in KS2 English TA. | NPD |
| KS2_LEVAXMAT | Achieved level 5 or above in KS2 Maths | NPD |
| KS2_LEVAXMATTA | Achieved Level 5 (above expected level) in KS2 Maths TA. | NPD |
| KS2_LEVAXENGMAT | Achieved level 5 or below in KS2 English and maths | NPD |
| KS2_LEVAXSCITA | Achieved Level 5 (above expected level) in KS2 Science TA. | NPD |
| KS2_LEVAXEMSTA | Achieved level 5 or above in KS2 English, maths and science TA | NPD |
| KS2_LEVBXREAD | Achieved Level 3 or below in KS2 Reading | NPD |
| KS2_LEVBXREADTA | Achieved Level 3 or below in KS2 Reading TA. | NPD |
| KS2_LEVBXWRIT | Achieved Level 3 or below in KS2 Writing | NPD |
| KS2_LEVBXWRITTA | Achieved Level 3 or below in KS2 Writing TA. | NPD |

| Variable Name | Description | Source |
|-----------------|---|--------|
| KS2_LEVBXENG | Achieved Level 3 or below in KS2 English. | NPD |
| KS2_LEVBXENGTA | Achieved Level 3 or below in KS2 English TA. | NPD |
| KS2_LEVBXMAT | Achieved Level 3 or below in KS2 Maths. | NPD |
| KS2_LEVBXENGMAT | Achieved Level 3 or below in KS2 Maths TA. | NPD |
| KS2_LEVBXMATTA | Achieved Level 3 or below in KS2 Maths TA. | NPD |
| KS2_LEVBXSCITA | Achieved Level 3 or below in KS2 Science TA. | NPD |
| KS2_LEVBXEMSTA | Achieved Level 3 or below in KS2 English, Maths and Science TA. | NPD |
| KS2_LEV6READMAT | Achieved Level 6 in KS2 Reading or KS2 Maths | NPD |
| KS2_LEVADREADTA | Absent or Disapplied in Reading TA | NPD |
| KS2_LEVADWRITTA | Absent or Disapplied in Writing TA | NPD |
| KS2_LEVADENGTA | Absent or Disapplied in English TA. | NPD |
| KS2_LEVADMATTA | Absent or Disapplied in Maths TA. | NPD |
| KS2_LEVADSCITA | Absent or Disapplied in Science TA. | NPD |
| KS2_LEVATENG | Absent of unable to access the test in English | NPD |
| KS2_LEVATMAT | Absent of unable to access the test in Maths | NPD |
| KS2_TOTPTS | Total KS2 point score as used in the value added calculations | NPD |
| KS2_APSDENS | Number of subjects pupil contributes to the average at the school level | NPD |
| KS2_APSDENN | Number of subjects pupil contributes to the average at the national level | NPD |
| KS2_APSDENNMTS | Number of subjects in which the pupil contributes to the APS | NPD |
| KS2_ENGLEVK1 | KS1 English level for progress measure | NPD |
| KS2_ENGLEVK2 | KS2 English level for progress measure | NPD |
| KS2_MATHLEVK1 | KS1 maths level for progress measure | NPD |
| KS2_MATHLEVK2 | KS2 maths level for progress measure (including TA) | NPD |

| Variable Name | Description | Source |
|-------------------|---|--------|
| KS2_PROGENG12 | Number of levels of progress in English between KS1 and KS2 | NPD |
| KS2_PROGMATH12 | Number of levels of progress in maths between KS1 and KS2 | NPD |
| KS2_PROGENG12FLAG | Pupil flag for making 2 levels of progress in English between KS1 and KS2 | NPD |
| KS2_PROGMAT12FLAG | Pupil flag for making 2 levels of progress in maths between KS1 and KS2 | NPD |
| KS2_INKS12VA | Pupil included in value added (VA) model. | NPD |
| KS2_KS1APS | KS1 prior attainment average point score (APS) (not finely graded) | NPD |
| KS2_KS2APSG | KS2 current attainment average point score (using fine grading) | NPD |
| KS2_KS1READPS | KS1 prior attainment Reading point score | NPD |
| KS2_KS1WRITPS | KS1 prior attainment Writing point score | NPD |
| KS2_KS1MATPS | KS1 prior attainment Maths point score | NPD |
| KS2_KS1EXP | KS1 Expected Levels | NPD |
| KS2_EALGRP | English as additional language | NPD |
| KS2_KS1APS2 | KS1 APS squared. | NPD |
| KS2_KS1APS3 | KS1 APS cubed. | NPD |
| KS2_KS2ENGFG | KS2 English point score (using fine grading) | NPD |
| KS2_KS2MATFG | KS2 maths point score (using fine grading) | NPD |
| KS2_VAAPSSCORE | English + Maths VA score (Actual-predicted) | NPD |
| KS2_VAENGSCORE | English VA score (Actual-predicted) | NPD |
| KS2_VAMATSCORE | Maths VA score (Actual-predicted) | NPD |
| KS2_VAAPSPRED1 | Predicted score without deviation (English and Maths) | NPD |
| KS2_VAAPSPRED | Predicted score with ceiling (English and Maths) | NPD |
| KS2_VAENGPRED1 | Predicted score without deviation (English) | NPD |
| KS2_VAENGPRED | Predicted score with ceiling (English) | NPD |

| Variable Name | Description | Source |
|--------------------|---|--------|
| KS2_VAMATPRED1 | Predicted score without deviation (maths) | NPD |
| KS2_VAMATPRED | Predicted score with ceiling (maths) | NPD |
| KS2_PE_DEV | Prior attainment KS1 reading point score deviation | NPD |
| KS2_PM_DEV | Prior attainment KS1 maths point score deviation | NPD |
| KS2_PSENG | English P-scale | NPD |
| KS2_PSREAD | Reading P-scale | NPD |
| KS2_PSWRITE | Writing P-scale | NPD |
| KS2_PSSPEAK | Speaking P-scale | NPD |
| KS2_PSLISTEN | Listening P-scale | NPD |
| KS2_PSMATHS | Mathematics P-scale | NPD |
| KS2_PSNUM | Number P-scale | NPD |
| KS2_PSUSING | Using and Applying P-scale | NPD |
| KS2_PSSHAPE | Shape, Space and Measures P-scale | NPD |
| KS2_PSSCIENCE | Science P-scale | NPD |
| KS2_EAL_PAPS | Is English not first language x Prior APS | NPD |
| KS2_EAL_PAPSSQ | Is English not first language x Prior APS squared | NPD |
| KS2_MOB1 | Pupil joined school in the latest academic year (year 6) | NPD |
| KS2_MOB2 | Pupil joined school in the latest academic year (year 5) | NPD |
| KS2_MOB3 | Pupil joined school in the latest academic year (year 3 or 4) | NPD |
| KS2_NEWMOBILE | Did pupil joining the school after 12 September 2010 (in year5) | NPD |
| KS2_REFTEST | Pupil KS2 results withheld by school? | NPD |
| KS2_REFTA | Pupil TA results withheld by school? | NPD |
| RECORDSTATUS_SPR12 | Record Status | PLASC |

| Variable Name | Description | Source |
|--------------------------|--|--------|
| ACADEMICYEAR_SPR12 | Academic Year | PLASC |
| CENSUSDATE_SPR12 | Census Date | PLASC |
| CENSUSTERM_SPR12 | Census Term | PLASC |
| ONROLL_SPR12 | On roll | PLASC |
| ETHNICGROUPMAJOR_SPR12 | Pupil's minor ethnic group based on extended ethnicity code | PLASC |
| FSMELIGIBLE_SPR12 | Eligible for FSM | PLASC |
| CONNEXIONS_SPR12 | Do parents consent to pupil data being shared with Connexions? | PLASC |
| LANGUAGEGROUPMAJOR_SPR12 | Pupil's major language group based on language code. | PLASC |
| FUNDEDHOURS_SPR12 | Funded hours | PLASC |
| HOURSATSETTING_SPR12 | Hours at setting | PLASC |
| ENROLSTATUS_SPR12 | Enrolment status | PLASC |
| TYPEOFCLASS_SPR12 | Type of class | PLASC |
| NCYEARACTUAL_SPR12 | The year group in which the pupil is taught for the majority of their time | PLASC |
| SENPROVISION_SPR12 | Provision types under the SEN Code of Practice. | PLASC |
| SENPROVISIONMAJOR_SPR12 | Pupil's major SEN provision group based on SEN provision code | PLASC |
| SPR12_2012_IDACI | IDACI 2010 (Decile) | CLS |

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