

16 Year GCSE Study dataset coding for child exam results

This document describes the variables and coding in the dataset from the age 16 exam results data collection. This red font is used to display each dataset variable name and the numeric coding.

For the purposes of this document, the layout and formatting of the original questionnaire have been changed, so as to accommodate variable names and coding information.

The wording of the original questionnaire is unchanged (from the cohort 2 version), and is shown in a black font.

Detailed exam results are not generally shared for analysis. Many sets of exam results are unique, memorable to participants and hence potentially identifiable. Furthermore, the wide range of qualification types and subjects in the raw data, often with small Ns, are difficult to analyse.

Instead, composite variables have been derived and these are outlined in this document. The composites have been created in the following 7 common subject groups:

- English
- Maths
- Science
- Technology subjects
- Humanities
- Languages
- Vocational subjects
- Total for all subjects

Appendix II summarises this grouping of subjects.

Equivalent composites, for the subjects listed above, have been derived in these three qualification groups:

- GCSEs: derived from GCSE results only
- Others: derived from all other, GCSE-equivalent qualifications but not including GCSEs
- All: GCSEs and all other equivalent qualifications combined

Three types of composite variable have been made in each case:

- Mean grade
- Point score
- Number of qualifications

Appendix III describes how numbers of 'other' qualifications are assessed in terms of GCSE equivalence.

Appendix I summarises the coding used for grades.

In addition to these 72 composites (8 subject groups, 3 qualification categories, 3 composite types), the following have been added:

- Mean grade for the combined 'core' subjects: English, maths and science (derived for GCSE, other, and all qualifications)
- Number of GCSE results at grades A* to C

The composite variable names are tabulated within the document below. Details of derivation may be found in the 16 Year derived variables page.

Age 16 School Examination Results for <twinn forename> <twinn surname> (<TwinID>)

Please use this form to record all qualifications that you have passed so far at school.

On this first page, please record your GCSE results. On the second and third pages, please record all other types of examination results, including BTECs, OCR Nationals, and others.

GCSE results

pcexnogcse1/2: 1=yes, 0=no; variable to flag absence of any recorded short-course or full GCSE results in this section of the questionnaire.

Composite variables derived from GCSEs only:

Subject group	Mean grade	Point score	Number
Maths	pcexgcsematgrdml/2	pcexgcsematpsctl/2	pcexgcsematnuml/2
English	pcexgcseenggrdml/2	pcexgcseengpsctl/2	pcexgcseengnuml/2
Science	pcexgcseescigrdml/2	pcexgcseescipsctl/2	pcexgcseescinuml/2
Core subjects	pcexgcsecoregrdml/2	-	-
Technology	pcexgcsetecgrdml/2	pcexgcsetecpsctl/2	pcexgcsetecnuml/2
Humanities	pcexgcsehumgrdml/2	pcexgcsehumpsctl/2	pcexgcsehumnuml/2
Language	pcexgcselangrdml/2	pcexgcselanpsctl/2	pcexgcselannuml/2
Vocational	pcexgcsevocgrdml/2	pcexgcsevocpsctl/2	pcexgcsevocnuml/2
All subjects	pcexgcsegrdml/2	pcexgcsepsctl/2	pcexgcsenuml/2
All subjects achieved with grades A* to C	-	-	pcexgcseabcnuml/2
Coding or range:	4 to 11	0 or higher	0 or higher

See the 16 Year derived variables page for details of derivation.

Raw data variables for the GCSE results are listed below.

These raw variables are not generally shared for analysis.

Each grade variable has coding 4-11 (see Appendix I).

The subject variables, where they exist for 'other' subjects at the end of each table, have coding 1-7 (see Appendix II).

Half-award (short course) GCSEs

Half-award GCSEs (also called **GCSE short courses**) are shortened versions of GCSEs, worth half a GCSE each.

If you did not take any of these, please skip this section and go on to GCSE results below.

If you did take one or more half-award GCSEs, please use this table to record your grades.

Use the space at the end of the table to record any subject not listed.

Grade	Subject
pcexsgcsere1/2	Religious Education (RE) or Religious Studies (RS)
pcexsgcsecitz1/2	Citizenship
pcexsgcseict1/2	ICT
pcexsgcseothsg1/2	pcexsgcseoths1/2

GCSE results

Please record grades for all completed GCSEs. Do not include separate module results.

Use the spaces at the end of the table to record any subjects not listed, including additional subjects for double-award GCSEs.

Grade	Subject
pcexgcseenla1/2	English, or English Language
pcexgcseenli1/2	English Literature
pcexgcsemdst1/2	Media Studies
pcexgcsemath1/2	Maths
pcexgcsestat1/2	Statistics
pcexgcseescic1/2	Science or Core Science
pcexgcseescia1/2	Science Additional
pcexgcsebiol1/2	Biology
pcexgcsechem1/2	Chemistry
pcexgcsephys1/2	Physics
pcexgcsehist1/2	History
pcexgcsegeog1/2	Geography

Grade	Subject
pcexgcserel1/2	Religious Education (RE) or Religious Studies (RS)
pcexgcsefren1/2	French
pcexgcsegerm1/2	German
pcexgcsespan1/2	Spanish
pcexgcseedt1/2	DT (Design & Technology)
pcexgcseict1/2	ICT or IT
pcexgcsebsst1/2	Business Studies
pcexgcseart1/2	Art and Design
pcexgcsepe1/2	Physical Education (PE)
pcexgcsedram1/2	Drama
pcexgcsemusc1/2	Music
pcexgcseoth1g1/2	pcexgcseoth1s1/2
pcexgcseoth2g1/2	pcexgcseoth2s1/2
pcexgcseoth3g1/2	pcexgcseoth3s1/2
pcexgcseoth4g1/2	pcexgcseoth4s1/2

Other results

pcexnother1/2: 1=yes, 0=no; variable to flag absence of any other results (i.e. other than GCSEs) on the remaining pages of this form.

Composite variables derived from qualifications other than GCSEs (and as described on the following pages):

Subject group	Mean grade	Point score	Number
Maths	pcexothermatgrdml/2	pcexothermatpsctl/2	pcexothermatnum1/2
English	pcexotherenggrdml/2	pcexotherengpsctl/2	pcexotherengnum1/2
Science	pcexotherscigrdml/2	pcexotherscipsctl/2	pcexotherscinum1/2
Core subjects	pcexothercoregrdml/2	-	-
Technology	pcexothertecgrdml/2	pcexothertecpsctl/2	pcexothertecnum1/2
Humanities	pcexotherhumgrdml/2	pcexotherhumpsctl/2	pcexotherhumnum1/2
Language	pcexotherlangrdml/2	pcexotherlanpsctl/2	pcexotherlannum1/2
Vocational	pcexothervocgrdml/2	pcexothervocpsctl/2	pcexothervocnum1/2
All subjects	pcexothergrdml/2	pcexotherpsctl/2	pcexothernum1/2
Coding or range:	1 to 11	0 or higher	0 or higher

Composite variables derived from all qualification, including GCSEs and others:

Subject group	Mean grade	Point score	Number
Maths	pcexallmatgrdml/2	pcexallmatpsctl/2	pcexallmatnum1/2
English	pcexallengrdml/2	pcexallengpsctl/2	pcexallengnum1/2
Science	pcexallscigrdml/2	pcexallscipsctl/2	pcexallscinum1/2
Core subjects	pcexallcoregrdml/2	-	-
Technology	pcexalltecgrdml/2	pcexalltecpsctl/2	pcexalltecnum1/2
Humanities	pcexallhumgrdml/2	pcexallhumpsctl/2	pcexallhumnum1/2
Language	pcexalllangrdml/2	pcexalllanpsctl/2	pcexalllannum1/2
Vocational	pcexallvocgrdml/2	pcexallvocpsctl/2	pcexallvocnum1/2
All subjects	pcexallgrdml/2	pcexallpsctl/2	pcexallnum1/2
Coding or range:	1 to 11	0 or higher	0 or higher

See the 16 Year derived variables page for details of derivation.

Other results: raw variables

The raw variables listed for qualifications on the following pages are not generally shared for analysis.

BTEC results

Please complete this table for any completed BTECs.

Subject	Introductory (level 1) or First (level 2)?	Certificate or Diploma?	Grade (Pass, Merit, Distinction or Distinction*)

OCR National results

Please complete this table for any completed OCR Nationals (OCRNs).

Subject	Level 1 or Level 2?	First Award, Award, First Certificate or Certificate?	Grade (Pass, Merit, Distinction or Distinction*)

City & Guilds results

Please complete this table for any completed City & Guilds qualifications.

Subject	Level 1 or Level 2?	Award, Certificate or Diploma?	Grade (Pass, Merit, Distinction or Distinction*)

BTEC, OCR National and City & Guilds qualification variables

These three qualification types have been coded into three sets of four variables, as tabulated below (a maximum of 3 qualifications of these types may be recorded).

Qualification type	Subject	Grade	Award (number of GCSE equivalents)
pcevocl1t1/2	pcevocl1s1/2	pcevocl1g1/2	pcevocl1a1/2
pcevocl2t1/2	pcevocl2s1/2	pcevocl2g1/2	pcevocl2a1/2
pcevocl3t1/2	pcevocl3s1/2	pcevocl3g1/2	pcevocl3a1/2
<u>Coding:</u> 1=BTEC 2=OCR National 3=City & Guilds	<u>Coding:</u> 1-7 See Appendix II	<u>Coding:</u> 4-11 See Appendix I	<u>Coding:</u> 1-4 See Appendix III

These qualification types were very commonly used as alternatives to GCSEs in schools, and are usually the biggest component of the 'other' (non-GCSE) composite variables. The subject variable, coded 1-7 as shown, determines the subject group to which each qualification contributes.

Functional Skills, Key Skills, Skills for Life, ALAN and ASDAN qualifications

Please use this table to record any of the following qualifications that you have passed:

- **ALAN** (Adult Literacy or Numeracy)
- **ASDAN**
- **Functional Skills**
- **Key Skills**
- **Skills for Life**
- **Basic Skills**

Qualification type (ALAN, ASDAN, Key Skills, etc)	Subject	Entry Level, Level 1 or Level 2?

These closely-related types of qualifications have been recorded using the following variables:

Qualification type	Subject	Grade
pcexskillitt1/2	[Literacy/English]	pcexskillitg1/2
pcexskilnumt1/2	[Numeracy/Maths]	pcexskilnumg1/2
pcexskiloht1/2	pcexskiloths1/2	pcexskilothg1/2
Coding: 1=Functional Skills 2=Key Skills 3=Skills for Life (or Basic Skills) 4=ALAN 5=ASDAN	Coding for pcexskiloths1/2: 1=ICT 2=COPE 3=Improving Own Learning 4=Problem Solving 5=Working with Others	Coding: 1-3, 4 or 8 See Appendix I

These variables allow recording of a maximum of one result each for Literacy, Numeracy plus another subject.

Each of these qualifications is equivalent in value to half a GCSE (see Appendix III).

For subject-coding in the composites:

- **pcexskillitg1/2** contributes to English
- **pcexskilnumg1/2** contributes to Maths
- **pcexskilothg1/2** contributes to Technology if the subject is ICT, or Vocational for the other subjects

AIDA, CIDA and DIDA qualifications

Please complete this table if you have passed an **AIDA, CIDA** or **DIDA** qualification in digital applications.

AIDA (Award), CIDA (Certificate), CIDA+ (Extended Certificate) or DIDA (Diploma)?	Level 1 or Level 2?	Grade (Pass, Merit, Credit or Distinction)
pcexdigat1/2: 1=AIDA 2=CIDA 3=CIDA+ 4=CIDA See Appendix III.	pcexdigag1/2: 4-11 See Appendix I.	

Note that only one of these digital applications results may be recorded.
For subject-coding in the composites, this qualification contributes to Technology.

AS levels

Please use this table to record the grades for any **AS-levels** that you have already passed.
Please do not record AS-levels that you have started but not yet passed.

Grade	Subject

(AS levels are post-16 qualifications that were recorded by small numbers of twins at age 16. They are not included as dataset variables and they do not contribute to the composites because they cannot be equated to GCSEs, in terms of grade or workload.)

Any other school qualifications

Please use this table to record any other types of school qualifications, which you have passed but not recorded in the tables above.

Examples of types of qualifications you could record here are:

- **Entry Level Certificates**
- **Sports Leadership or Dance Leadership**
- **Preparation for Working Life Certificate**
- **NVQ**
- **FSMQ** (Foundation, Intermediate or Advanced)
- **CLAIT**
- **ECDL**
- **Project** (Foundation, Higher or Extended)

Please record as much information as you can about each qualification.

If you know the level (Entry Level, Level 1, Level 2 or Level 3), that would be particularly helpful to us.

Qualification Type (e.g. NVQ, Entry Level Certificate, etc)	Subject	Any additional information, e.g. Level and Grade

The following qualification types and their variables have been used in the composites:

Qualification type	Subject or type variable and coding	Grade variable	Grade coding (See Appendix I)	Subject for composites
NVQ	pcexnvqs1/2: 1-7 (See Appendix II)	pcexnvqg1/2	4=level 1 pass 8=level 2 pass	[from subject codes 1-7]
ECDL, CLAIT	pcexothitt1/2: 1=ECDL, 2=CLAIT	pcexothitg1/2	4=level 1 pass 8=level 2 pass	Technology
Entry Level Certificate	[English]	pcexelceng1/2	1=Entry level 1	English
	[Maths]	pcexelcemat1/2	2=Entry level 2	Maths
	[Science]	pcexelcscil1/2	3=Entry level 3	Science
Preparation for Working Life Certificate	-	pcexwklf1/2	1-3=entry level 4=level 1 pass 8=level 2 pass	Vocational
Leadership Certificate	pcexldrs1/2: 1=Sports, 2=Dance	pcexldrg1/2	4=level 1 pass 8=level 2 pass	Vocational
Other entry level	pcexothentryn1/2 *	-	1=Entry level 1	Vocational
Other level 1 qualifications	pcexothlevel1n1/2 *	-	4=level 1 pass	Vocational
Other level 2 qualifications	pcexothlevel2n1/2 *	-	8=level 2 pass	Vocational

* These 3 variables simply record the number of 'other' qualifications, and were used for rare or unusual cases. The qualification type, grade and subject are not recorded. For the composites, it is assumed that the subject type is Vocational; that the grade is as shown in the table; and that the number of qualifications can be multiplied by 0.5 to estimate the approximate number of GCSE equivalents.

Appendix I: Grade coding

All GCSE-equivalent grade variables, for all qualification types, are coded using the following ordinal, numeric coding ranging from 1 to 11:

Code	GCSE grades	Vocational grades	Entry level grades	NQF level
1			1	Entry
2			2	
3			3	
4	G	Level 1 pass		1
5	F	Level 1 merit		
6	E	Level 1 distinction		
7	D	Level 1 distinction *		
8	C	Level 2 pass		2
9	B	Level 2 merit		
10	A	Level 2 distinction		
11	A*	Level 2 distinction *		

The NQF (National Qualification Framework) allows equivalent qualifications to be given comparable grades. At age 16, this is especially useful for equating a range of vocational qualifications to GCSEs: level 1 and level 2 BTECs, OCR Nationals, City & Guilds, NVQs and others as collected in this questionnaire. Hence, all GCSE-equivalent qualifications can be assigned grade values 4-11.

Entry level qualifications (here coded 1-3) were designed to measure achievement levels below GCSE.

Appendix II: Subject coding

The following numeric codes 1-7 have been used to record the subject (or subject category) for certain qualifications, where indicated in the questionnaire.

Value	Subject type	GCSE and half-GCSE 'other' subjects included	Further subjects included for vocational qualifications
1	Maths	Maths, Statistics	Mathematical applications
2	English	English Language and Literature	English
3	Science	Biology, Chemistry, Physics, Science	Combined Science, Applied Science
4	Technology	DT, ICT, Graphics, Textiles, Food Technology and others	All engineering, design, manufacturing, construction and vehicle-related subjects. All subjects related to IT or computing.
5	Humanities	Geography, History, RE, Media Studies, Art & Design, Music, Drama, Performing Arts, Sociology, Psychology and others	Media, Interactive Arts, Aesthetics
6	Language	Welsh, Italian, Chinese, Latin, Ancient Greek, etc: all non-English languages	Language, Business Language Competence
7	Vocational	PE, Business Studies, Home Economics, Health & Social Care, Leisure and Tourism	All subjects relating to retail, travel, hospitality, catering, health, social and child care, personal care, fashion, animal care, agriculture, environment, sport and outdoor activities. All subjects relating to business skills, general work skills and employability.

The use of these subject categories, coded 1-7, has allowed simplified recording of a wide range of similar subjects; this is especially true in vocational qualifications. It also allows relatively simple transformation into dataset variables such as mean grades in each of the 7 subject areas.

Appendix III: Award coding

This reference table shows equivalents, in terms of workloads or value, of GCSEs with other 'vocational' types of qualification. This is referred to as the 'Award' type for many qualifications. This is based on guidance from the NQF (National Qualification Framework), which was current at the time of data collection. These equivalents have been used in deriving a range of composite dataset variables measuring achievement levels at age 16 (documented elsewhere).

Qualification type	Award type	Number of GCSE equivalents
GCSE	Single-award	1
	Double-award	2
	Short-course	0.5
OCR National	First	1
	National	2
	First Certificate	3
	Certificate	4
BTEC	Certificate	2
	Diploma	4
City & Guilds	Certificate	2
	Diploma	4
NVQ	-	5
Entry Level Certificate	-	1
Functional Skills, Skills for Life, Key Skills, ALAN, ASDAN	-	0.5
ECDL, CLAIT	-	1
Digital Applications	AIDA	1
	CIDA	2
	CIDA+	3
	DIDA	4
Sports Leadership, Dance Leadership, Working Life Certificate	-	0.5