

16 Year GCSE Study raw data coding for child exam results

This document describes the variables and coding in the raw data from the age 16 exam results data collection. This blue font is used to display each field/variable name in the raw data, and the numeric coding used for responses.

The raw data are structured and coded in a form matching the questionnaire format used in cohorts 2, 3 and 4. Although cohort 1 data were collected using a simpler form, the cohort 1 data have subsequently been restructured into the same format as for the other cohorts.

For the purposes of this document, the layout and formatting of the original cohort 2 questionnaire have been changed, to accommodate raw variable names and coding information, all of which is shown in this blue font. This has increased the number of pages, so page numbering has been removed.

The wording of the original questionnaire is unchanged and is shown in a black font.

The twin responses in the questionnaire were recorded on paper largely in the form of free text. These text responses were interpreted and coded at the time of data entry, so all raw data are stored in coded numeric form. As a result of the recoding, the resulting item variables do not always exactly match the format of the original tables in the questionnaire.

For reference, three appendices at the end of this document summarise the coding used in many of the variables:

Appendix I: grade coding

Appendix II: subject coding

Appendix III: award coding

Age 16 School Examination Results for <twin forename> <twin 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.

The following raw variables were used to show the presence or absence of qualifications in the two main sections of the questionnaire. These were not explicit questions in the questionnaire, but were recorded as part of data entry.

Variable	Coding	Meaning
noGCSEs	True or False	False: at least one GCSE result was recorded (next page). True: no GCSE results were recorded.
NoOtherQuals	True or False	False: at least one qualification other than GCSEs was recorded. True: no other qualifications were recorded after the GCSE page.

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
gcseShortRE	Religious Education (RE) or Religious Studies (RS)
gcseShortCitzn	Citizenship
gcseShortICT	ICT
gcseShortOthGrd	gcseShortOthSub **

Note that a maximum of one 'other' half-award GCSE result was recorded here.

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
gcseEngLang	English, or English Language
gcseEngLit	English Literature
gcseMediaStd	Media Studies
gcseMaths	Maths
gcseStatistics	Statistics
gcseScience	Science or Core Science
gcseScienceAdd	Science Additional
gcseBiology	Biology
gcseChemistry	Chemistry
gcsePhysics	Physics
gcseHistory	History
gcseGeog	Geography
gcseRE	Religious Education (RE) or Religious Studies (RS)
gcseFrench	French
gcseGerman	German
gcseSpanish	Spanish
gcseDT	DT (Design & Technology)
gcseICT	ICT or IT
gcseBusnStd	Business Studies
gcseArt	Art and Design
gcsePE	Physical Education (PE)
gcseDrama	Drama
gcseMusic	Music
gcseOthGrd1	gcseOthSub1 **
gcseOthGrd2	gcseOthSub2 **
gcseOthGrd3	gcseOthSub3 **
gcseOthGrd4	gcseOthSub4 **

Note that a maximum of four 'other' GCSE results were recorded here.

* Appendix I shows the coding used for all GCSE and half-award GCSE grades (values 4-11 for grades G up to A*).

** Appendix II shows the coding used for subject variables, for the 'other' GCSE and half-award GCSE fields (subject types coded 1-7)

'Double-award' GCSEs were quite frequently recorded by twins. Where they occurred, they were recorded in the raw data as two separate GCSE results, sometimes using the four 'other GCSE' fields at the end of the table. Common examples were Double Science (recorded in the data as Core + Additional Science); Double English (recorded in the data as Language + Literature); and Double Business Studies (recorded as Business Studies + one of the 'other' GCSE fields).

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. This allows up to 3 different qualification results (BTEC, OCR and/or City & Guilds) to be recorded.

Depending on the type of Award (Certificate, Diploma, etc), one of these qualifications could be equivalent in workload to 1, 2, 3 or 4 GCSEs. The Award names varied between the three types (BTEC, OCR, C&G). See Appendix III for reference.

Qualification type	Subject	Grade	Award (number of GCSE equivalents)
VocType1	VocSubject1	VocGrade1	VocEquiv1
VocType2	VocSubject2	VocGrade2	VocEquiv2
VocType3	VocSubject3	VocGrade3	VocEquiv3
<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

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 in the raw data:

Qualification type	Subject	Grade
SkillsLitType	[records Literacy or English]	SkillsLitGrade
SkillsNumType	[records Numeracy or Maths]	SkillsNumGrade
SkillsOtherType	SkillsOtherSubject	SkillsOtherGrade
<u>Coding:</u> 1=Functional Skills 2=Key Skills 3=Skills for Life (or Basic Skills) 4=ALAN 5=ASDAN	<u>Coding:</u> 1=ICT 2=COPE 3=Improving Own Learning 4=Problem Solving 5=Working with Others	<u>Coding:</u> 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.

Some of these qualifications were designed for adult learning of literacy, numeracy or working skills, but in practice were sometimes used in schools. They are useful measures of achievement for some twins who did not complete GCSEs.

The types of qualification shown were very largely equivalent (and in some cases had interchangeable names). Each is equivalent in value to half a GCSE (see Appendix III).

For these qualifications, the only recorded grades were as follows (see Appendix I):

- Entry level 1
- Entry level 2
- Entry level 3
- Level 2 pass
- Level 3 pass

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)
DidaEquiv: 1=AIDA 2=CIDA 3=CIDA+ 4=CIDA See Appendix III .	DidaGrade: 4-11 See Appendix I .	

Note that only one of these digital application qualification results may be recorded.

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
ASgrade1	
ASgrade2	
Coding: 12=E, 13=D, 14=C, 15=B, 16=A, 17=A* (grades at advanced level, not GCSE)	

Note that a maximum of two AS-level results may be recorded.

AS level subjects are not recorded.

These are post-16 qualifications (occasionally taken early) and as such cannot be equated to GCSEs or other qualification types above, 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 were coded into variables in the raw data:

Qualification type	Subject or type variable and coding	Grade variable	Grade coding (See Appendix I)
NVQ	NvqSubject: 1-7 (See Appendix II)	NvqGrade	4=level 1 pass 8=level 2 pass
ECDL, CLAIT	OtherIctType: 1=ECDL, 2=CLAIT	OtherIctGrade	4=level 1 pass 8=level 2 pass
Entry Level Certificate	[English]	ElcEnglishGrade	1=Entry level 1 2=Entry level 2 3=Entry level 3
	[Maths]	ElcMathsGrade	
	[Science]	ElcScienceGrade	
Preparation for Working Life Certificate	-	WorkingLifeGrade	1-3=entry level 4=level 1 pass 8=level 2 pass
Leadership Certificate	LeadershipSubject: 1=Sports, 2=Dance	LeadershipGrade	4=level 1 pass 8=level 2 pass

If an FSMQ qualification was reported, the grade was recorded in variable FsmqAdvancedGrade, coded 12-17 as for AS levels above. Like AS levels, the FSMQ is a post-16 qualification that cannot be equated to GCSEs in grade or workload.

Other, rarer qualification types, plus surplus qualifications that could be accommodated in the variables above, are recorded in approximate form simply by recording the number of qualifications at each level:

Variable	Meaning
OtherEntryLevelNumber	number of other qualifications at entry level
OtherLevel1Number	number of other qualifications at level 1
OtherLevel2Number	number of other qualifications at level 2
OtherLevel3Number	number of other qualifications at level 3

Here, during data entry, each additional qualification at entry level, level 1 or level 2 was assumed to be equivalent to half to one GCSE in workload.

Appendix I: Grade coding

All grade variables, for all qualification types, are coded using the following ordinal, numeric coding ranging from 1 to 17:

Code	GCSE grades	Vocational grades	Entry level grades	Advanced 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 *			
12				E	3
13				D	
14				C	
15				B	
16				A	
17				A*	

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.

Level 3 "advanced" qualifications were designed to be taken after age 16, but in a few cases twins had started these by the time they reached age 16.

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