Centre for Longitudinal Studies, Institute of Education

Teaching students quantitative methods using resources from the British Birth Cohorts

Assessment of Cognitive Development through Childhood

Resources

This document summarises the set of resources based on the assessment of cognitive development in children – namely reading and mathematics – for teaching students quantitative methods using the British Birth Cohorts. The assessments completed by the children differ by age and cohort. Additional supplementary resources are also outlined.

Data files: three SPSS data files have been prepared.

1. The *b516reading.sav* data file based on information provided by the 1970 British Cohort Study or BCS70.

2. The *n716reading.sav* data file based on the 1958 National Child Development Study or NCDS.

3. The *n716maths.sav* data file based on the 1958 National Child Development Study or NCDS.

Each data file contains overall assessment scores at three different age points in childhood. For BCS70 this was at age 5, 10 and 16, for NCDS this was age 7, 11 and 16. The exact age of each child at the time they sat the assessment is also included in the dataset.

Word Documents: five word documents accompany the three SPSS datasets.

1. CognitiveAssessmentSummary.doc: this document summarizes the available resources.

2. CognitiveAssessmentQuestions.doc: this document includes:

a) A short description of the reading and mathematics assessments sat at each age.

b) Examples of how the questions were presented to the cohort members in the questionnaires.

3. CognitiveAssessmentVariables.doc: this document includes:

a) A list of all the variables in the *b516reading.sav,* the *n716reading.sav* and the *n716maths.sav SPSS* data files. (Original variable names from the full dataset and documentation of a particular survey are also included.)

    i) *b516reading.sav* contains 14 variables in total: the three reading assessment scores, standardised assessment scores at each age and the exact age of the child at the assessment and their sex.

    ii) *n716reading.sav* contains 14 variables in total: the three reading assessment scores, standardised assessment scores at each age and the exact age of the child at the assessment and their sex.

    iii) *n716maths.sav* contains 14 variables in total: the three mathematics assessment scores, standardised assessment scores at each age and the exact age of the child at the assessment and their sex.

b) SPSS syntax for constructing the summary reading score for BCS70 cohort members at age 10.

4. CognitiveAssessmentExercises.doc: this document includes:

A number of step-by-step exercises and additional exercises to complete. The exercises use the drop down menus but the SPSS syntax to run the commands is also included. The techniques covered in this document range from introductory descriptive statistics to multiple regression and include:

a) Descriptive statistics

b) Means

c) Correlations

d) Linear regression

e) Interaction terms

5. CognitiveAssessmentReferences.doc: this document includes:

a) References and further reading on the different assessments, including research based on the assessments in BCS70 and NCDS.

Additional resources

Data files: there are two additional SPSS data files:

1. *b034KeyVariables.sav* contains a selection of key variables from all sweeps of data collection in BCS70 that have taken place between birth to age 34. These variables can be merged with the *b516reading.sav* data file using the unique identifier 'key' to explore the relationship between cognitive development and socio-economic conditions in childhood and adulthood.

2. *n042KeyVariables.sav* contains a selection of key variables from all sweeps of data collection in NCDS that have taken place between birth and age 42. These variables can be merged with the *n716reading.sav* or *n716maths.sav* data files using the unique identifier 'serial', to explore the relationship between cognitive development and socio-economic conditions in childhood and adulthood.

Word documents: there is one additional word document.

1. KeyVariables.doc: this document contains:

a) A list of all the variables in the *b034KeyVariables.sav* and the *n042KeyVariables.sav SPSS* data files. (Original variable names from the full dataset and documentation of a particular survey are also included.)

b) *b034KeyVariables.sav* and *n042KeyVariables.sav* each contain a variety of socio-economic measures from the cohort members' childhood and adult years including parental education, social class in childhood, highest

qualification, employment status and occupation at various ages in adulthood.