



- There was significant variation in the numeracy levels of adults in the sample with no or low qualifications, suggesting that numeracy is developed through a range of activities, not just education.

---

## What we did

This research was undertaken in 2013 by the IOE's **National Research and Development Centre for Adult Literacy and Numeracy (NRDC)** as part of a suite of numeracy studies commissioned by the National Institute for Adult and Continuing Education (NIACE). It belongs with wider bodies of research on the intergenerational transmission of educational advantage and disadvantage and of cognitive skills.

The aim of this study was to examine the links between the numeracy skills of parents and their children. In doing so, this research focused on an underexplored area; to date considerably more research has examined the impact of parental/family literacy practices.

This paper builds on previous NRDC research by De Coulon et al. (2008) exploring the relationship between parents' basic skills and children's cognitive outcomes. Both studies use data from the 1970 British Cohort Study (BCS70), which follows in rich detail the lives of more than 17,000 individuals born in a single week in April, 1970.

## Implications and further information

This research paper underscores the need for longitudinal research into this area, in order not only to better understand the circumstances of skills transfer, but also to inform effective policy change.

The research report '[The intergenerational transfer of numeracy skills](#)' is available from the National Numeracy website.

Research cited in this briefing is available from the NRDC website at: [De Coulon et al. \(2008\)](#)

## Contact

**Contact:** David Mallows, Department of Lifelong and Comparative Education, Institute of Education, University of London

**Email:** [d.mallows@ioe.ac.uk](mailto:d.mallows@ioe.ac.uk)

**Phone:** +44 (0)20 7612 6592

**Team members:** Jon Carpentieri (Co-Principal Investigator), Olga Cara (Co-Principal Investigator), and Jenny Litster (Institute of Education).

Researchers are based at the IOE's National Research and Development Centre (NRDC) for Adult Literacy and Numeracy

## How we did it

The adult subjects of our analysis were 2,246 members of BCS70. All were randomly selected into a 'Parent and Child Survey' subsample in 2004 and all had at least one child aged between 3 and 16. 1,226 of these children (aged 3-5) completed an Early Number Concepts assessment, and 2,240 (aged 6-16) completed a Number Skills assessment, giving a total of 3,466 children to include in analysis. The adults took a computer-based numeracy assessment consisting of 17 multiple choice questions.

Our analysis investigated the relationship between parent and child numeracy scores using multiple linear regression analysis (the relationship between two factors, controlling for others). Models included not only parental numeracy scores, but also other parental characteristics that might influence children's scores, including socio-economic factors, such as household income, and home/parenting factors, such as frequency of parent-child reading. We also controlled for parents' cognitive abilities, using scores from cognitive testing on cohort members when they were five.