

# Early Childhood Education & Care & Long-term Effects

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Culture and social context (Macro-level)  
(e.g., labour markets & ideology)



Policy on early childhood services, e.g. ECEC



Family support, childcare, ECEC centre, etc.



Children's daily experiences (individual level)  
(home and out-of-home)

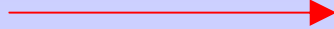


Children's development

**Factors impacting on children's development**

# EPPE STUDY in UK

(3+ yrs)



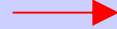
School starts



6yrs



7yrs



16yrs

**25 nursery classes**

**590 children**

**34 playgroups**

**610 children**

**31 private day nurseries**

**520 children**

**20 nursery schools**

**520 children**

**24 local authority day care nurseries**

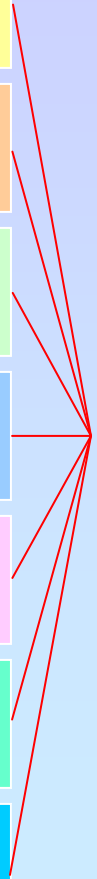
**430 children**

**7 integrated centres**

**190 children**

**home**

**310 children**

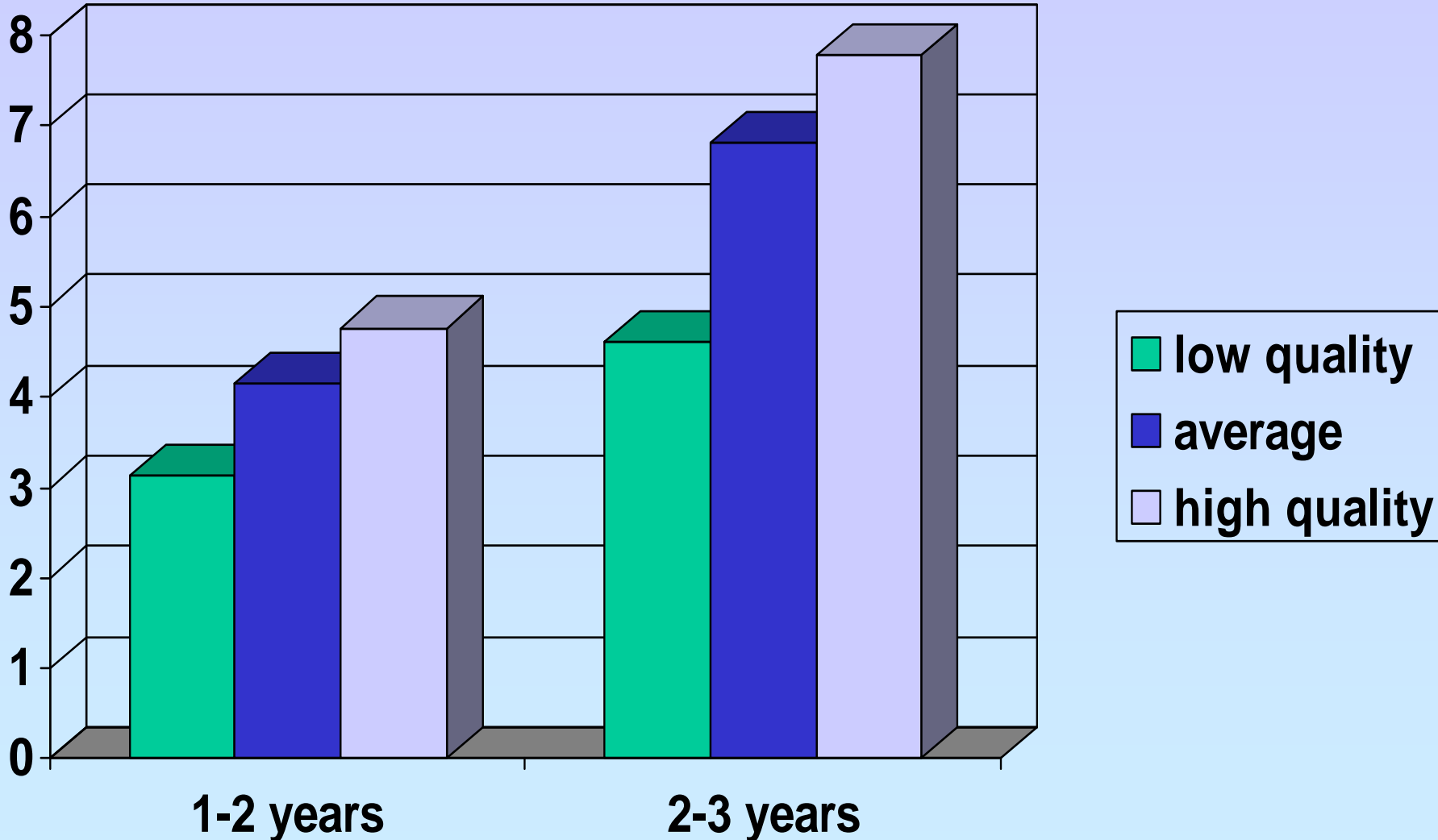


Key Stage 1  
600 Schools  
approx. 3,000 chd

Key Stage 2  
800 Schools  
approx. 2,500 chd

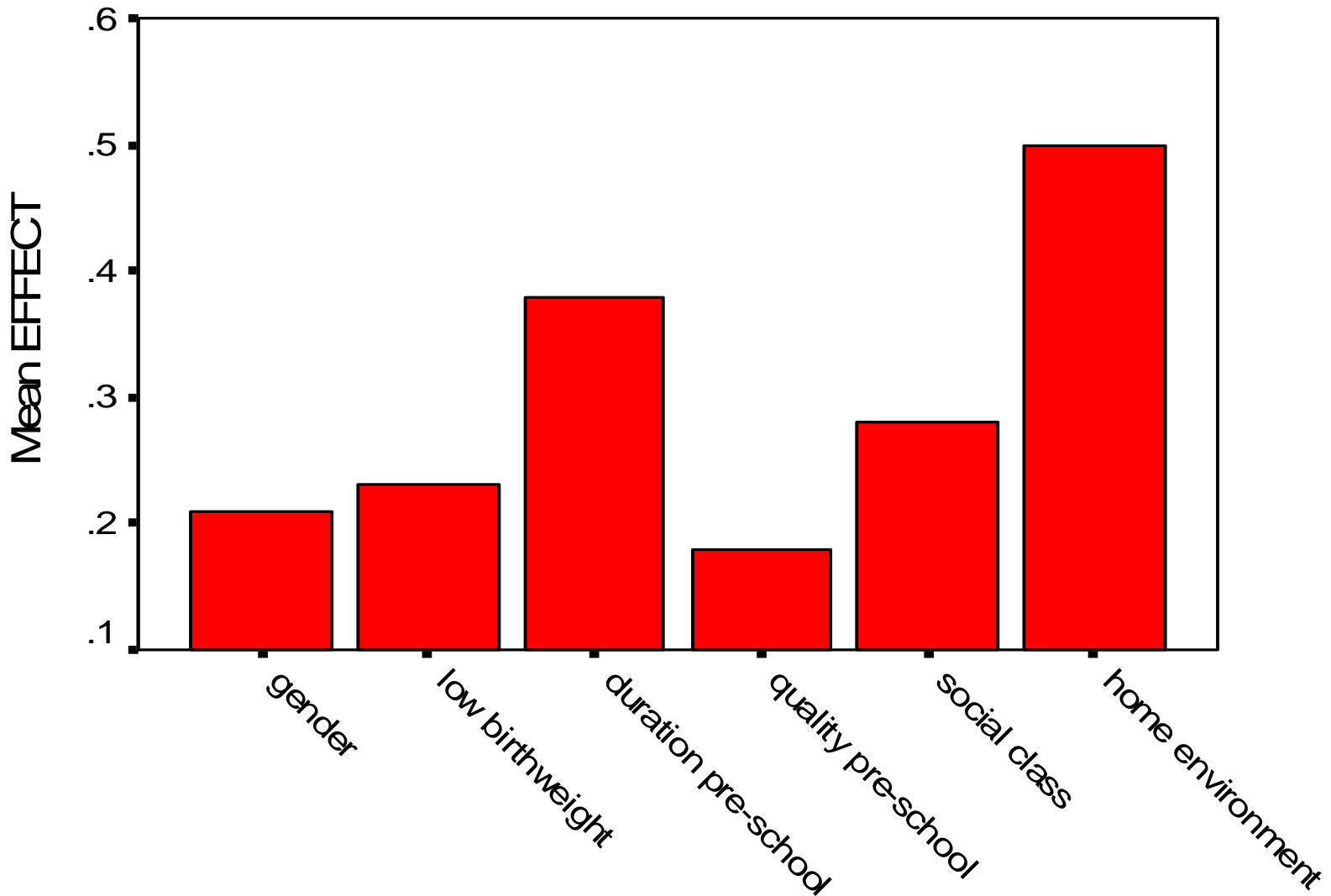
# Quality and Duration matter

(months of developmental advantage on literacy)



# Effects of child, home, and pre-school compared

## EFFECTS UPON LITERACY



# Home Learning Environment

Parents asked about activities in the home, and some were linked to development.

A home learning environment (HLE) index constructed

(Melhuish et al., 2001).

0 1 2 3 4 5 6 7  
*not occur* *very frequent*

Reading to child

Library visits

Painting & drawing

Playing with letters

Playing with numbers/shapes

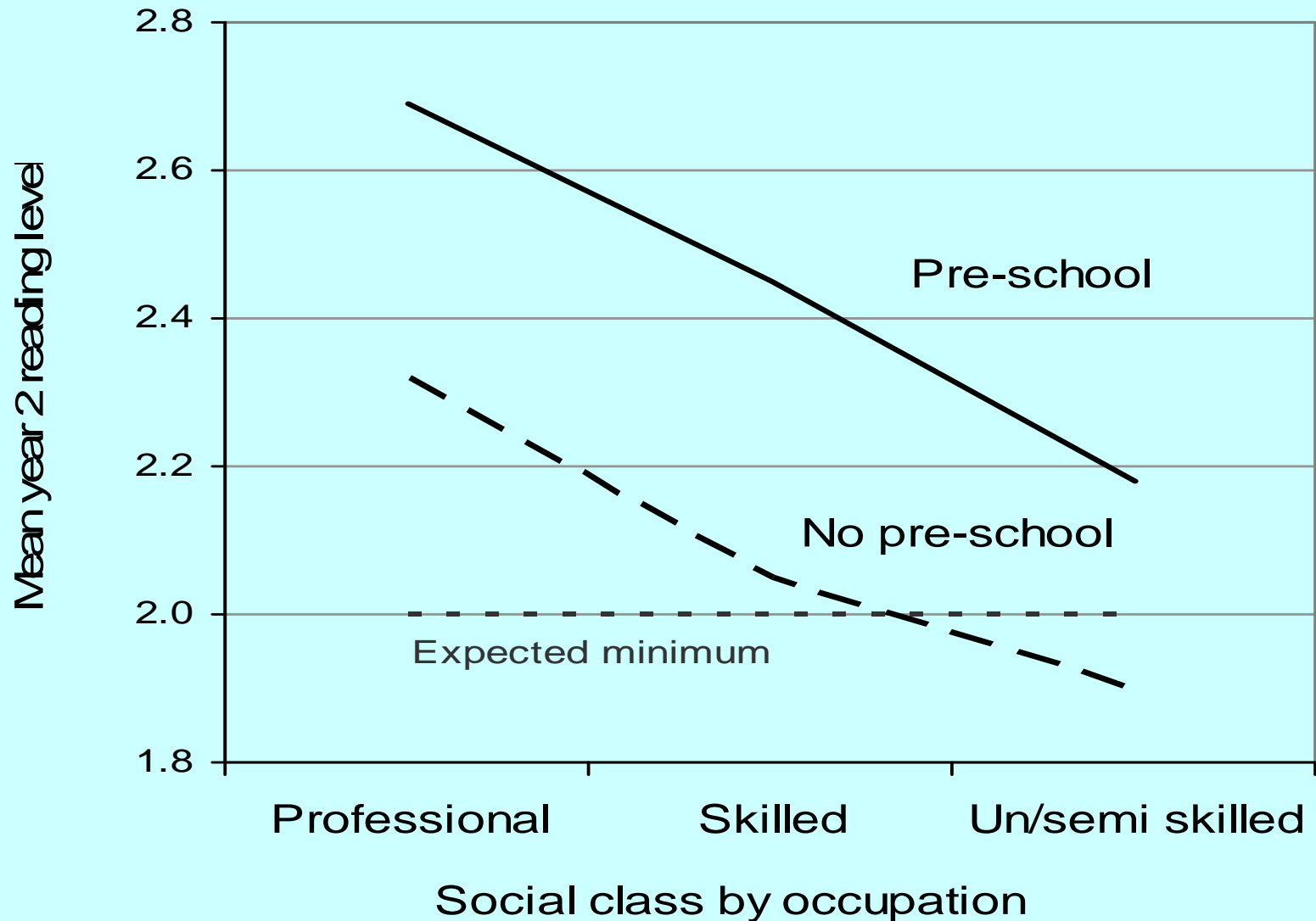
Songs/ poems /nursery rhymes

*The Home Learning Environment in the early years has powerful long-term effects*

*“What parents do is more important than who parents are”.*

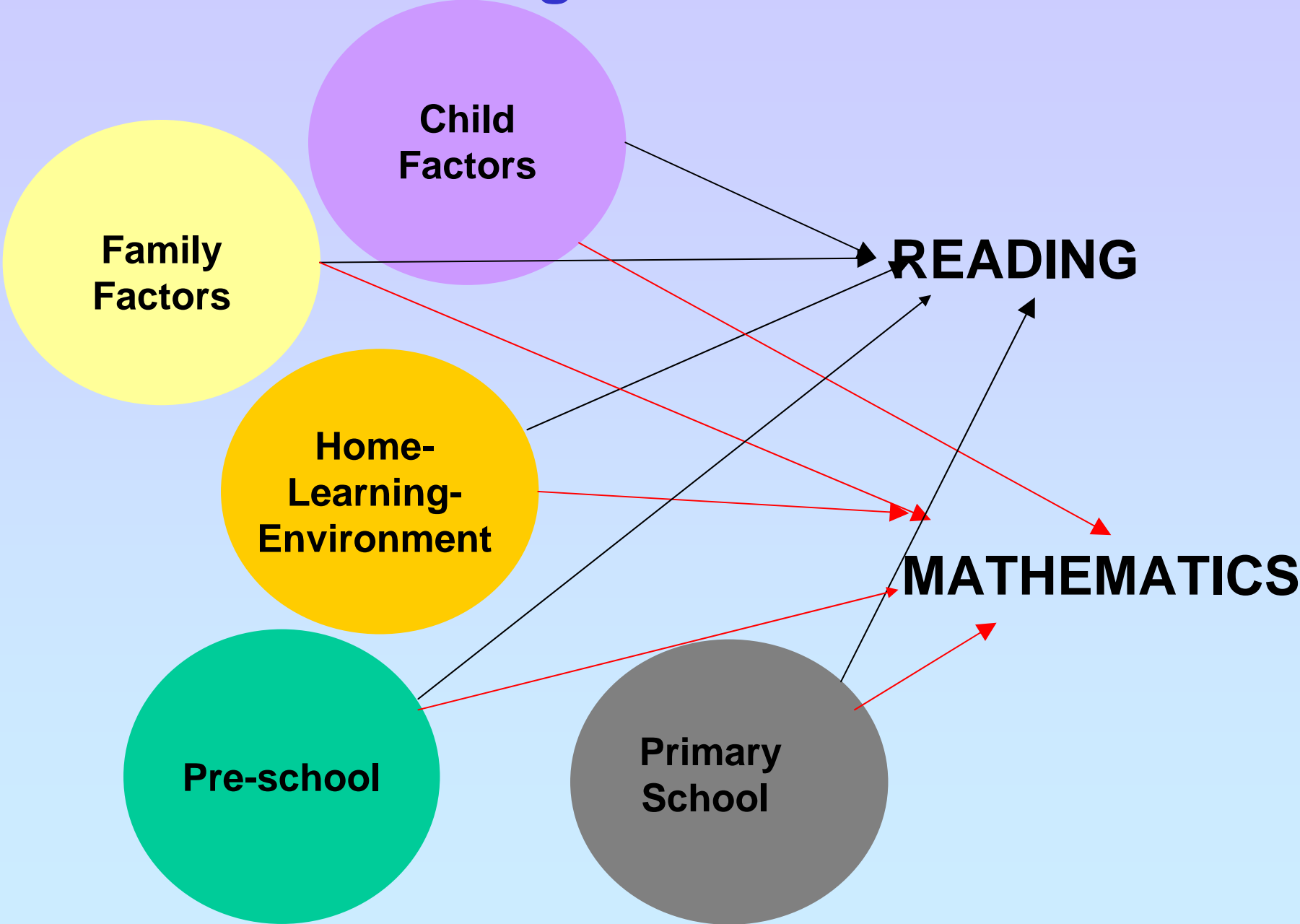
*(Melhuish et al., 2001)*

# Social class and pre-school on literacy (age 7)

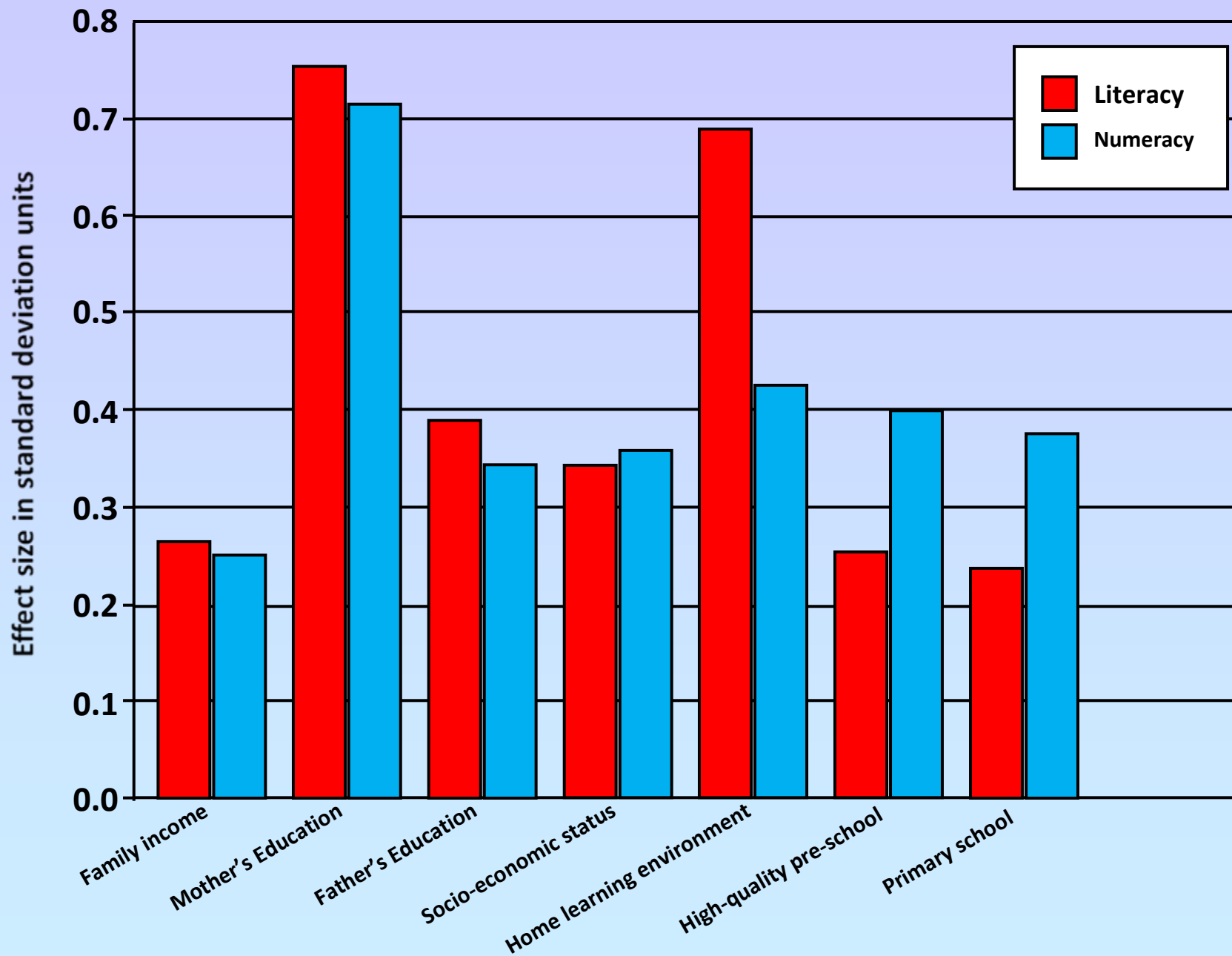




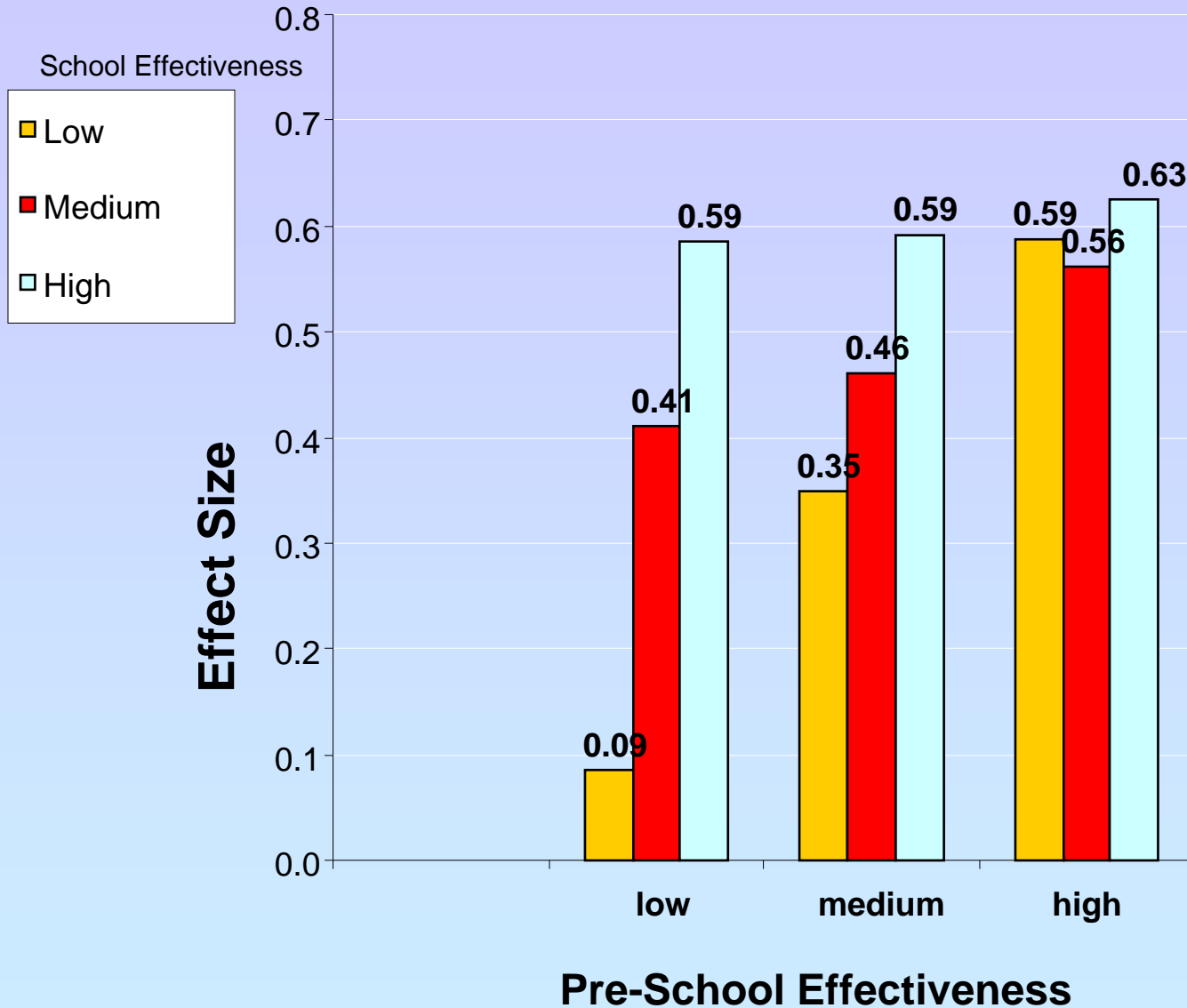
# Modelling later outcomes



# Effects upon Age 14; literacy and numeracy

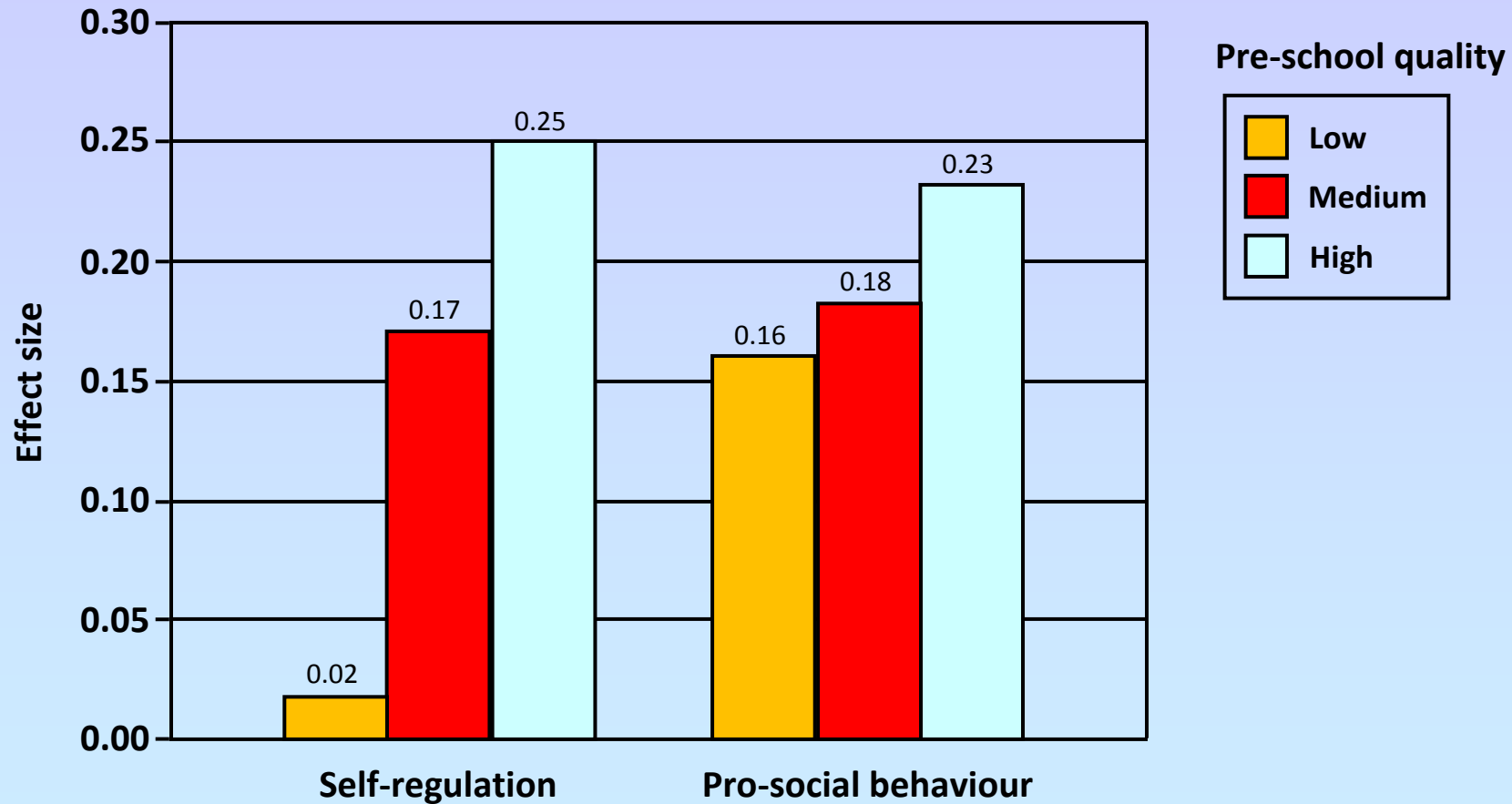


# Combined Impact of Pre- and Primary School - Maths

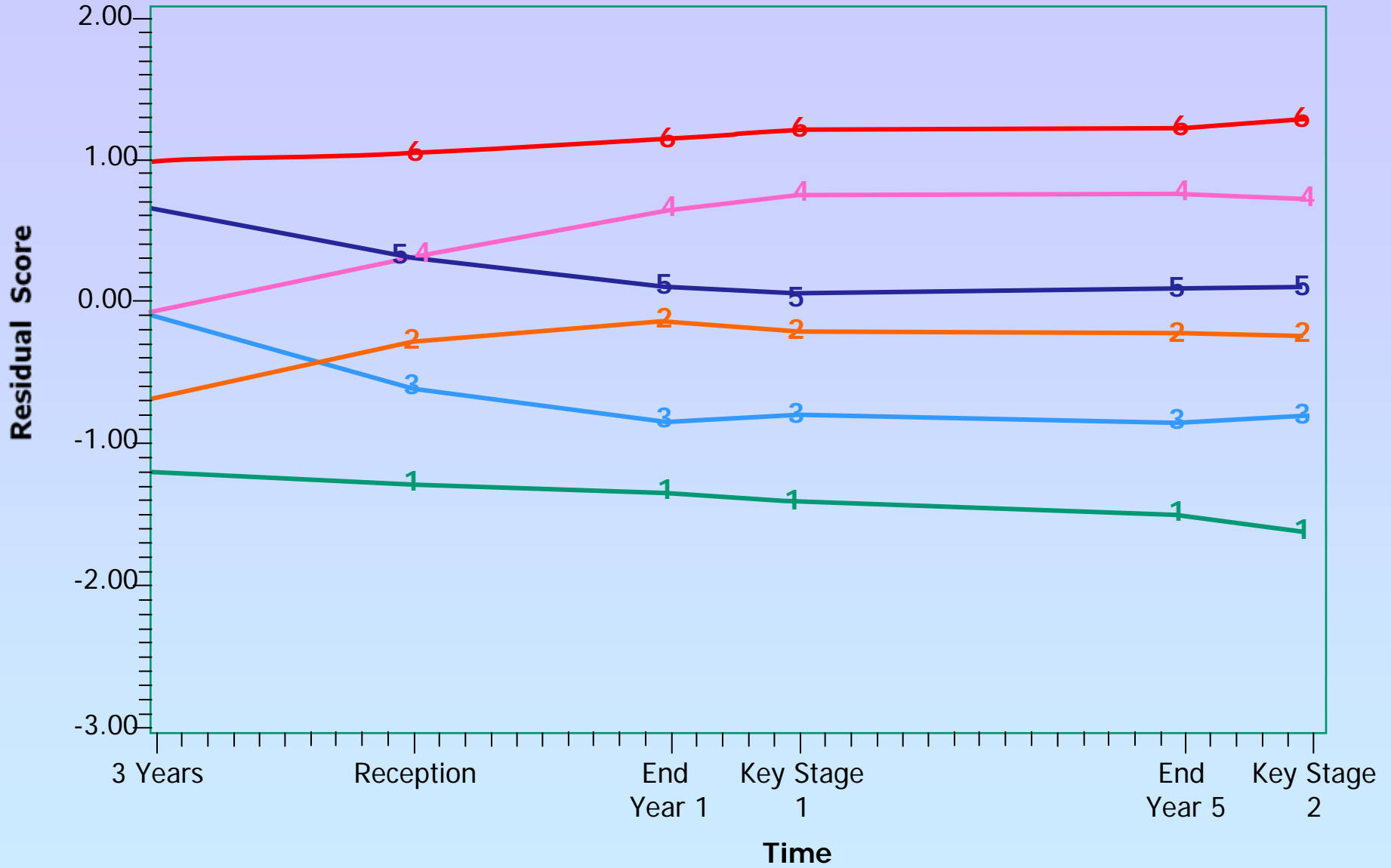


Reference Group: No Pre-School and low Primary School Effectiveness

# Pre-school Quality and Self-regulation and Pro-social behaviour (age 11 and 14)



# Trajectories for Numeracy



Group %

~~1~~1 8.2%

~~2~~2 19.6%

~~3~~3 18.8%

~~4~~4 17.3%

~~5~~5 23.2%

~~6~~6 12.9%

## EFFECTIVE PRE-SCHOOL PROVISION IN NORTHERN IRELAND (EPPNI)

Study in Northern Ireland

850 children followed from 3 to 11 years of age.

Similar results to EPPE in England.

At age 11, allowing for all background factors,

The effects of quality of pre-school persist until age 11 years

High quality pre-school – improved English and maths,

And improved progress in maths during primary school.

Children who attended high quality pre-schools were **2.4** times more likely in English, and **3.4** times more likely in mathematics, to attain the highest grade at age 11 than children without pre-school.

# Social Mix in ECEC affects child outcomes

- disadvantaged children show greater benefits when in centres that are socially mixed rather than centres just for disadvantaged children

# Conclusions

- From age 2 all children benefit from preschool.
- The quality of preschool matters.
- Part-time has equal benefit to full-time.
- Preschool effects persist until teenage years
- High quality preschool can protect a child from effects of a low effective school.
- Poor Children benefit from a social mix in ECEC.



# Effects on policy in UK

- Free part-time pre-school from age 3 (2004)
- Extension of parental leave (2004)
- 10-year Childcare Strategy (2004)
- Guidance for Children's Centres (2005)
- Childcare Bill (2006)
- Acceptance that money spent on pre-school produces savings later

# International Evidence

Studies from many countries now support the importance of high quality ECEC for child development in the long-term.

# USA- Age 5 Reading by pre-school quality: 12,800 children

- Comparison with no pre-school (Magnusson et al., 2003)

	<b>READING</b>		
	<b>ALL</b>	<b>Poverty</b>	<b>Low Mother Educ.</b>
Pre-school (High Quality)	1.66**	2.23**	3.44**
Pre-school (Low Quality)	1.34**	1.48*	1.21

In **Norway**, free preschool available to children aged 3 years during the 1960's and 1970's – huge increase in preschool attendance.

Analysis showed children attending preschool:

- 1.had higher educational levels and
- 2.better job outcomes later in life.
- 3.higher income in later life

In **France**, preschool expanded in 1970's  
– huge increase in preschool attendance.

Analysis showed preschool:

1. leads to higher income in later life
2. reduces socio-economic inequalities - children from less advantaged backgrounds benefit more.

**Switzerland** has also expanded preschool.

- Improved intergenerational education mobility
- especially beneficial for disadvantaged children

# Denmark

Bauchmüller, Gørtz and Rasmussen (2011)

[http://www.cser.dk/fileadmin/www.cser.dk/wp\\_008\\_rbmgawr.pdf](http://www.cser.dk/fileadmin/www.cser.dk/wp_008_rbmgawr.pdf)

Danish register data on whole population

5 quality indicators of preschool:

- 1) the staff-to-child ratio
- 2) the share of male staff in the preschool,
- 3) % of pedagogically trained staff
- 4) % of non-native staff,
- 5) the stability of the staff (staff turnover).

Controlling for background factors, **better preschool quality** linked to better test results in 9th grade.

**“the fact that we find long-lasting effects of pre-school even after 10 years of schooling is quite remarkable”**

Benefits of preschool have also been evident in **Asia** and **South America**.

- In **Bangladesh**, children attending preschool achieved higher attainment levels at primary school.
- **Uruguay** has followed suit - studies identified better attainment in secondary school for children who attended preschool.
- **Argentina** found increases in primary school attainment from children who spent at least 1 year in preschool.

Goodman & Sianesi (2005). Early education and children's outcomes: How long do the impacts last? *Fiscal Studies*, 26, 513-548.

Pre-school in random sample of children born in 1958 in UK

Effects on cognition and socialisation are long-lasting.

Controlling for child, family and neighbourhood, there were **long-lasting effects from pre-school education.**

pre-school leads to **better cognitive scores at 7 and 16 years**  
In adulthood, pre-school was found to increase  
the **probability of good educational qualifications and  
employment at age 33, and  
better earnings at age 33.**



# Gains from ECEC

## **Education and Social Adjustment**

- Educational Achievement improved
- Special education and grade repetition reduced
- Behaviour problems, delinquency and crime reduced
- Employment, earnings, and welfare dependency improved
- Smoking, drug use, depression reduced

## **Decreased Costs to Government**

- Schooling costs
- Social services costs
- Crime costs
- Health care costs

# LESSONS

1. Early years are very important
2. ECEC is part of infrastructure for a successful society
3. High quality ECEC boosts development
4. Parenting is also very important
5. ECEC can lift population curve.
6. Disadvantaged children benefit greatly from high quality ECEC.

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