EARLY CHILDHOOD PROGRAMMES

Why the Early years?

Many studies link adversity in early life to:

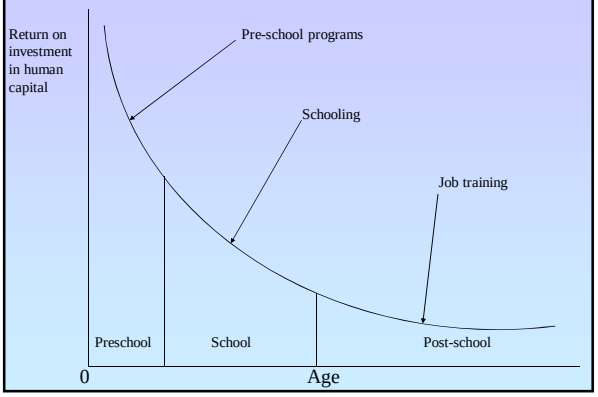
- **poor adult mental and physical health**
- **adult mortality**
- **anti-social and criminal behaviour**
- **substance abuse**
- **poor literacy**

Why the early years?

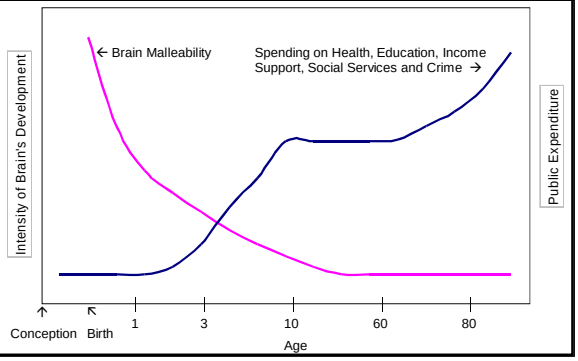
" If the race is already halfway run even before children begin school, then we clearly need to examine what happens in the earliest years." (Esping-Andersen, 2005)

" Like it or not, the most important mental and behavioural patterns, once established, are difficult to change once children enter school." (Heckman & Wax, 2004).

Rates of return to human capital investment (Heckman 2000)



Brain Development – Opportunity and Investment



Emerging knowledge on neurological development

- Brain development depends on both genes and experiences
- Rapid brain development takes place in the first year of life
- Early interactions directly affect the way the brain is wired
- Looks and smiles help the brain to grow
- Early relationships set the thermostat for later control of stress response

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Experience affects Brain Development

Conditions in early life affect the differentiation and function of billions of neurons and trillions of synapses in the brain

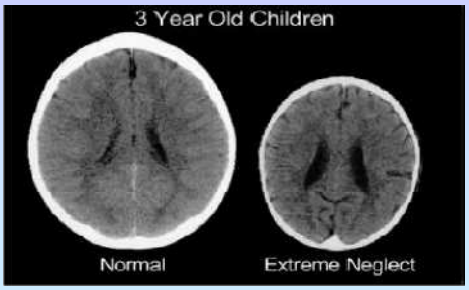
Early experience sets up neurological and biological pathways in the brain that affect well being throughout life

affecting: health

learning

behaviour

Differences in brain development following severe sensory neglect



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INFANTS LEARN SOUNDS BEFORE LANGUAGE

3 Month Olds
- Child in London
- Child in Oslo

Similar sound structure to utterances

10 month olds
- Child in London– sounds are similar to English
- Child in Oslo – sounds are similar to Norwegiansh

i.e. children learning to produce the sounds of the language before any words appear (around 1 year).

Early Childhood Programmes
examples

Pregnancy⟹	Nurse Family Partnership	home
Birth⟹	Early Head Start	centre + home
	Abecadarian	centre (+home)
3+⟹	Perry Preschool	centre
	Head Start	centre
	Child-Parent Centers	centre

Evaluation

Some evaluated by RCT
Some evaluated by quasi-experiments
(observational studies)

Key difference is randomisation
but also size of evaluation
nature of analysis
experiment vs. real life
sub-groups

2 British studies

Effective Provision of Preschool Education – EPPE
3000 children followed from age 3

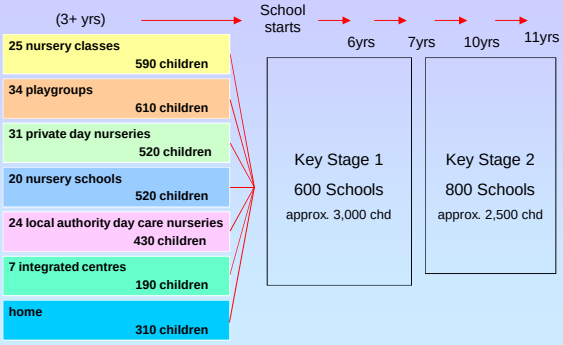
National Evaluation of Sure Start – NESS
8000 children followed from infancy

Effective Pre-School and Primary Education EPPE

A Longitudinal Study Funded by the DFES

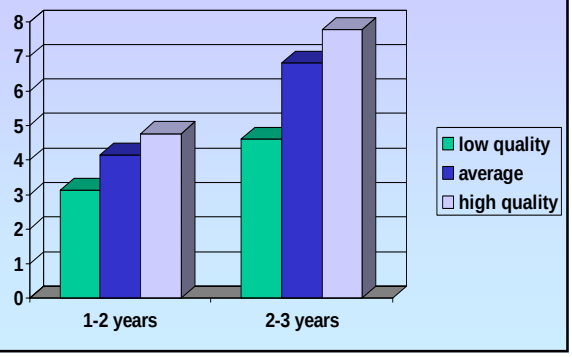
Kathy Sylva – University of Oxford
Pam Sammons – University of Nottingham
Iram Siraj-Blatchford – Institute of Education, University of London
Brenda Taggart – Institute of Education, University of London
Edward Melhuish – Birkbeck, University of London

EPPE STUDY

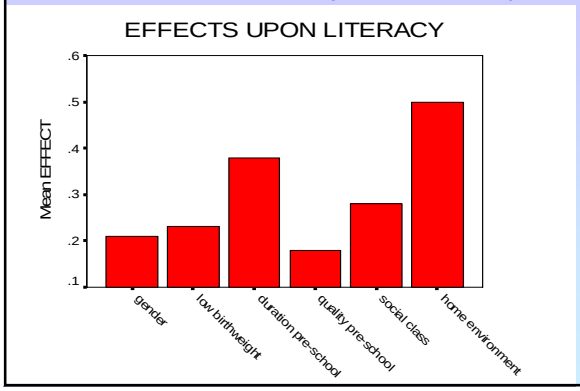


Quality and Duration matter

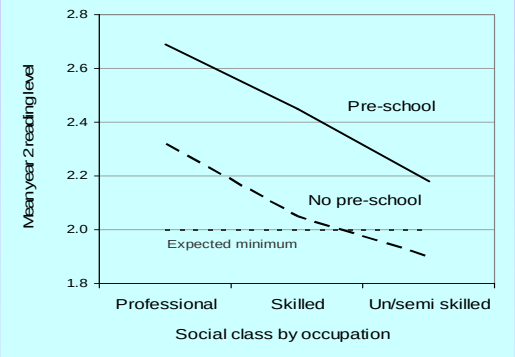
(months of developmental advantage on literacy)



Effects of child, home, and pre-school compared



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



Effective Pre-schools

Five areas were particularly important:

- **Quality of the adult-child verbal interaction.**
- **Knowledge and understanding of the curriculum.**
- **Knowledge of how young children learn.**
- **Adults skill in supporting children in resolving conflicts.**
- **Helping parents to support children's learning at home.**

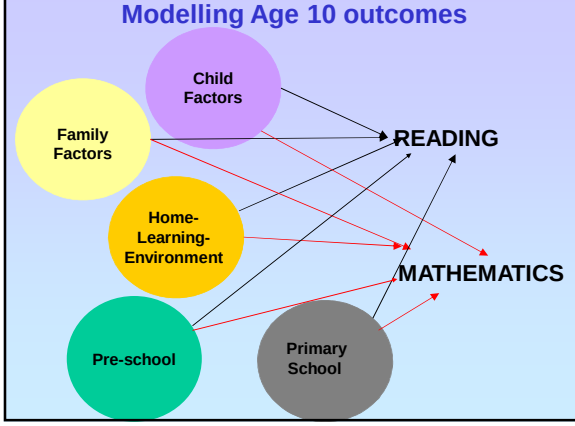
Measuring the effectiveness of primary schools

- Data on every primary school child for 3 years (2001/2, 2002/3, 2003/4).
- Age 7 – English, Maths, Science
- Age 11- English, Maths, science
- Data on child characteristics

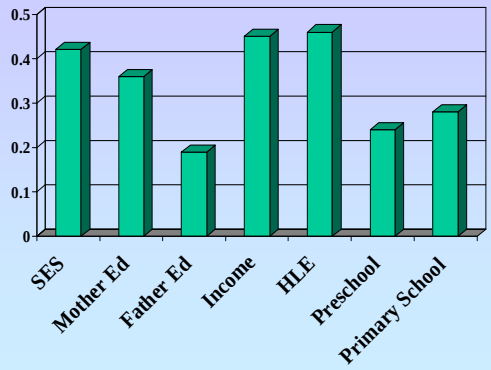
N = 600k+ pupils in each year,
N = 15,771 primary schools

- Schools where children make greater progress than predicted on the basis of initial attainment and pupil and area characteristics can be viewed as *more effective*.
- Schools where children make less progress than predicted can be viewed as *less effective*.

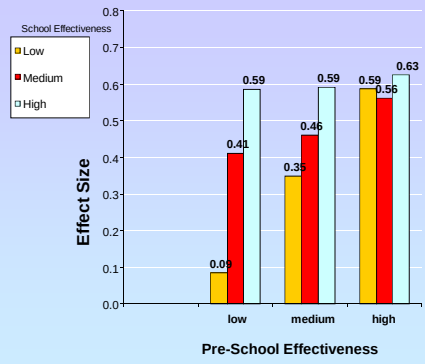
Modelling Age 10 outcomes



Effects upon child achievement -age 11



Combined Impact of Pre- and Primary School – Maths



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

What matters

3 elements that can lead to educational success

Good Home Learning Environment (pp. pre-school)

Good Pre-schools for longer duration

Good Primary schools

Those children with all 3 will out-perform those with 2
who will out-perform those with 1
who will out-perform those with 0
All other things being equal

Conclusions

- From age 2 all children benefit from pre-school.
- The quality of preschool matters.
- The duration of preschool matters in the early school years.
- Part-time has equal benefit to full-time.
- Quality of preschool effects persist until at least the end of primary school.
- High quality preschool can protect a child from consequences of attending low effective school.

EPPE results have influenced policy:

- Retention of nursery schools
- Free part-time pre-school place for all 3 & 4 year-olds (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

National Evaluation of Sure Start

- Local context analysis
  - study of communities over time
- Implementation
  - what do programmes do
- Impact
  - do programmes affect children and families
- Cost-effectiveness
  - how programmes spend money – and is it effective

Setting up SSLPs

- It takes longer than anticipated to set up SSLPs
- Most SSLPs did not approach fully operational level of expenditure until after 3 years

Changes in Sure Start communities - 2000 to 2005

Families

- More young children in SSLP areas
- Reduction in children in 'workless households'

Child health:

- Reductions in
  - hospitalisations for 0-3 year olds
  - low-birth weight in 'Indian subcontinent' areas
  - the proportion of children identified with SEN
  - 4 to 17 year olds on Disability Living Allowance

Changes in communities 2000 to 2005

School achievement for in SSLP areas

- Greater than England increases in
  - English achievement (KS2)
  - 5 (A*-C) GSCE passes
  - proportion staying on after 16

Crime and disorder:

- Greater than England reduction in:
  - burglary and vehicle crime
  - primary school permanent exclusions
  - unauthorised absences

Impact study

Aim:

- To evaluate impact upon children and families

Three components

- First phase
  - 9 and 36 month olds and their families
  - in SSLP and SSLP-to-be areas
- Programme variability
  - investigates links between implementation and impact
- Longitudinal study
  - 9000 children seen at 9 months, 3 years, 5 years
  - comparison group from Millennium Cohort Study

2005: Sub-group findings (3-year-olds)

- Among non-teenage mothers (86% of total):
  - greater child social competence in SSLP areas
  - fewer child behaviour problems in SSLP areas
  - less negative parenting in SSLP areas
- Effects on children appeared to be mediated by effects on mother:
  - SSLP → less negative parenting → better child social functioning

2005: Sub-group findings (3-year-olds)

- Among teenage mothers (14% of total):
  - less child social competence in SSLP areas
  - more child behaviour problems in SSLP areas
  - poorer child verbal ability in SSLP areas
- Among lone parent families (40%):
  - poorer child verbal ability in SSLP areas
- Among workless households (33%):
  - poorer child verbal ability in SSLP areas

Key question:

Why are some SSLPs more effective in achieving outcomes than others?

Programme variability provides some answers

Programme variability

Key dimensions of proficiency:

- Effective governance and management / leadership
- Informal but professional ethos of centre
- Empowerment of service providers and users

Programme variability

Key strategies to attain proficiency:

- Tuning into community for universal services
- Early identification and treatment for specialist services
- Recruiting / training staff – qualifications & attitudes
- Managing multi-agency teamwork

Current impact report

Published 4th March 2008

The impact of well-established SSLPs on 3-year-olds and their families

The impact of well-established SSLPs on 3-year-olds & their families

Methodology

Using data from NESS and MCS matching areas were carefully chosen so that we can compare –

- 5883 children / families in 93 SSLP areas, and
- 1879 children / families in 72 non-SSLP (MCS) areas
- 14 outcomes in common for NESS and MCS at 3 years

Results

- Controlling for child, family and area characteristics we test for SSLP vs. non-SSLP differences
- Of 14 outcomes 7 showed a significant difference between SSLP and non-SSLP areas, i.e. a SSLP effect

Results

- Of 14 outcomes 7 showed a significant difference between SSLP and non-SSLP areas, i.e. a SSLP effect
- 5 outcomes clearly indicated beneficial effects for SSLPs. These were for:
  - child positive social behaviour (cooperation, sharing, empathy)
  - child independence / self-regulation (works things out for self, perseverance, self-control)
  - Parenting Risk Index (observer rating + parent-child relationship, harsh discipline, home chaos)
  - home learning environment
  - total service use
- In addition there were better results in SSLPs for:
  - child immunisations
  - child accidents
- But these 2 outcomes could have been influenced by timing effects

What does this mean for the future?

- These benefits in terms of parenting and child development have a good prognosis. All are desirable effects that are likely to lead to better long-term outcomes for children
- we have good evidence (e.g. from EPPE) that higher independence and higher HLE are likely to lead to better long-term outcomes both intellectually and socially. The other beneficial outcomes support this view

Outcomes with no SSLP effect

- There were no differences between SSLP and non-SSLP areas for:

Mothers	Body Mass Index
	smoking
	life satisfaction
	rating of area
Fathers	involvement with child
Child	language development
	negative social behaviour

Do SSLP effects vary by subgroups?

- We looked at subgroups by 6 demographics
  - gender
  - ethnic group
  - teen / not teen mother
  - lone parents
  - workless households
  - income (below poverty line or not)
- We concluded that the SSLP effects do not vary for the different sub-populations

Why are results now so different to the earlier report?

- We need to acknowledge that there are methodological differences between the first phase and the current phase of the NESS impact study
- However there are good substantial reasons for why the results are different now

Reasons for differing results

1. Amount of exposure

   It takes 3 years for a programme to be fully functional. Therefore
   - in the first phase children / families were not exposed to fully functional programmes for much of the child's life
   - in the second phase children / families are exposed to fully functional programmes for all child's life

2. Quality of services
   - SSLPs have been reorganised as SSCCs with clearer focus to services following lessons from earlier years, and NESS
   - early on staff had a lot to learn. As knowledge and experience have been acquired over 7 years, SSLPs have matured in functioning and staff skill shortages have reduced
   - hence it is likely that children / families are currently exposed to more effective services than in the early years of Sure Start

Conclusion

- The impact of Sure Start has improved, probably because of:
  1. increasing quality of service provision, greater attention to the hard to reach, the move to children's centres

     as well as
  2. the greater exposure of children and families
- These positive results are modest but are evidence that the impact of Sure Start programmes is improving

Overarching messages

- Programmes have improved over the years and Children's Centres are in the right direction
- Many examples of good practice
- There is still great variation between best and worst
- Need to learn from most effective Children's Centres

Overarching messages – cont.

- Inter-agency collaboration is essential for good services
- Active engagement of health services important for success of Sure Start. Health has contact with all families and children from pregnancy
- However beneficial services are, children and families need to be in touch with them
- Those with the greatest need may be hardest to reach and engage

Overarching messages – cont.

- Trust is fundamental to parental engagement
- Staff capacity problems, many staff inadequately trained for the work to be done and staff turnover is very disruptive

My personal choice for top priority

Need to increase focus on child language development

International Perspectives

Countries planning for economic expansion are increasing their investment in pre-school education.
E.g. China, India, New Zealand, Scandanavia, Germany, France, Holland, Canada, some US states (e.g. Cal., Minn., Mass.).

See
Melhuish & Petrogiannis (Eds.) (2006)
Early Childhood Care & Education: International Perspectives.
London: Routledge

For more information

Melhuish, et al. (2008). Effects of fully-established Sure Start Local Programmes on 3-year-old children and their families living in England: a quasi-experimental observational study. *Lancet, 372*, 1641-1647.

Melhuish, et al. (2008). Preschool influences on mathematics achievement. *Science, 321*, 1161-1162.

www.ness.bbk.ac.uk

www.ioe.ac.uk/schools/ecpe/eppe/