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Keynote Symposia Series

The Effective Pre-School, Primary and Secondary Education Project (EPPSE):
A mixed-methods, longitudinal programme of research
(1997 – 2013)

Chair: Brenda Taggart
Discussant: Professor Andrew Pollard

BERA SIG: Educational Research and Educational Policy Making
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### N.B. About this symposium

**Duration**: 1hr 30 mins

There are 4 parts to this symposium. Each part is made up of two papers which address some of the key findings and the current topics from the EPPSE programme of research. Following the presentations there will be the Discussant’s remarks followed by Q and A.

### N.B. About this handout

This handout has been designed to give a ‘flavour’ of EPPSE as a programme of research. It gives an overview of each presentation, key findings and commentary. It does not include implications, recommendations and references. For detailed information on each topic it is recommended that the readers consults the appropriate full Technical Paper, Project Report or journal article. Information and a list of links are included at the end of this handout. Alternatively contact Brenda Taggart: 0207 612 6219 / b.taggart@ioe.ac.uk if you have a query or require an electronic copy of this handout.
Symposium Overview

Introduction

The original Effective Provision of Pre-school Education (EPPE 1997 -2003) study investigated children’s intellectual and social/behavioural development between the ages of 3-7 years focusing on family and pre-school influences. The Effective Pre-school and Primary Education (EPPE 3-11 2003 - 2008) study, funded by the Department for Children, Schools and Families (DCSF) has followed up the same children to age 11 years investigating both family, pre-school and primary school influences on children’s attainment, progress and social/behavioural development. A further study: Effective Pre-school, Primary and Secondary Education (EPPSE 2008 – 2011) has continued to follow these children into their adolescence up to the end of Key Stage 3 (age 14). The Department for Education (DfE) is continuing to fund EPPSE till 2013 when the EPPSE students will have completed compulsory schooling and move to their post 16 destinations.

The EPPE has an educational effectiveness design using mixed methods including multilevel modelling for the analyses of child outcomes and case studies of effective practice. See the EPPSE website http://eppe.ioe.ac.uk for a full list of publication.

Overview of the Keynote Symposium

This symposium demonstrates the importance of mixed-methods, longitudinal studies for showing how institutions such as the family or the different phases of schooling interact to shape children’s long term development. No single method on its own could address such a broad range of policy questions nor such a spectrum of pedagogical practices. The symposium will summarise key findings from several studies that comprise the Effective Pre-school, Primary and Secondary Education (EPPSE) programme of research, including studies in the pre-school and also the primary school period. In addition, we will report on the results from new analyses of the later phases of children’s learning life course.

EPPSE is a longitudinal study commissioned in 1997 by the Department for Education (DfE). It has studied the cognitive and social/behavioural development of 3,000 children from the ages of 3/5 until age 16+ (the end of compulsory schooling) in 2013. The research has investigated, and will report here, on a wide range of influences including child, family, the home learning environment (out of school learning) and neighbourhood influences as well as the contribution of pre-school and primary education to children’s developmental outcomes.

The research broke new ground in applying an educational effectiveness methodology to studying pre-school effects and is the largest study in Europe to investigate the effects of pre-school and primary school on children’s short, medium and longer term development. The study is ‘mixed methods’ in that it combines both quantitative and qualitative data and analyses in an interactive relationship which provides both persuasive statistical outputs and ‘rich’ descriptions of the influences on children’s development. Over the years EPPSE has, through engagement with a wide range of research questions, developed from a single study into a programme of research. We will report here on some of the additional sub-studies which includes a foci on: pedagogy in the early years, promoting equality in the early years, special educational needs, the effectiveness of all primary schools in England, the quality of teaching in Year 5, the transition from primary to secondary school and children’s learning trajectories.

These four papers will provide a background to the EPPSE research programme for those new to EPPSE and will also provide new results for those who have already engaged with the study and have interest in its methods, findings or policy impact. With the exception of the qualitative ‘trajectories’ report this symposia will discuss findings up to the end of primary school. The findings of the early secondary school phase will be reported in December 2011.
EPPSE as a Mixed Methods Research Programme

Presenters:
Professor Kathy Sylva – University of Oxford
Brenda Taggart – Institute of Education, London

Abstract
The EPPE longitudinal study, commissioned in 1997 by the DfE has followed the cognitive and social/behavioural development of 3,000 children from age of 3/5 to age 16+. The EPPE study charted the contribution of pre-school to children’s development. Additional sub-studies have addressed a wider range of questions, such as the continuing effects of pre-school and their interaction with primary schooling. This paper describes how EPPSE has developed into a programme of research which has had a profound impact on national policy and the everyday practices associated with better outcomes for young children.

Research methods/or mapping the literature
EPPSE is innovative in applying a school effectiveness methodology to the study of pre-school. It is the largest study in Europe on impact of early experiences. EPPSE combines statistical analyses of administrative databases with questionnaire, interview and case study data to provide robust outcome analyses. This paper discusses the uniqueness of longitudinal research that studies ‘naturally occurring variation’ in children’s educational experiences in answering research questions about development in the absence of experimental designs and the importance of an iterative relationship between qualitative and quantitative methods. The interplay between qualitative and qualitative strands led to fresh findings and novel interpretations.

Analytical and/or theoretical framework
The analytic framework employs multi-level modeling to explain children’s outcomes using predictors at child (gender etc.), family, (social class etc.), community (neighbourhood etc.) and school-level (effectiveness) level. Predictors were derived from interviews and questionnaires as well as direct observations. EPPSE considers the impact of predictors both uniquely and in combination. This powerful analytical framework enabled EPPSE to answer policy questions, for example, the impact of family salary versus pre-school quality on outcomes or the impact of long versus short duration on academic attainment.

Research findings and/or contribution to knowledge
EPPSE findings are of national and international importance. They have contributed to the development of major policy initiatives, e.g., Sure Start Children’s Centres). They have also made a major contribution to knowledge about effective educational practices.

This paper describes the design of EPPE and EPPE 3-11 and EPPSE (3-14 and 16+). It reports on findings from both the original, and sub-studies (good transitions from primary to secondary school, early identification of SEN, neighbourhood influence, etc.). It will also explore how a research programme can make its findings useful in policy and practice. The key to impact is in a mixed methods approach and ‘partnership working’ with funders.
Presentation 1: EPPSE as a Mixed Methods Research Programme

Part 1: Kathy Sylva*, Brendan Taggart*, Edward Melhuish#, Pam Sammons* and Iram Siraj-Blatchford*
Part 2: Brenda Taggart*, Kathy Sylva*, Edward Melhuish#, Pam Sammons* and Iram Siraj-Blatchford*


Introduction
The original Effective Provision of Pre-school Education (EPPE) study investigated children’s intellectual and social/behavioural development between the ages of 3-7 years (Sylva et al., 2004) and focused on child, family and pre-school influences. The Effective Pre-school and Primary Education study (EPPE 3-11), funded by the Department for Children, Schools and Families (DCSF) followed up the same sample of children to the end of primary school (age 11 years) and additionally investigated primary school influences on children’s attainment, progress and social/behavioural development. The third phase of the research: the Effective Pre-school, Primary and Secondary Education project (EPPSE 3-14) is funded to follow the same sample to the end of Key Stage 3 (age 14) and will report in December 2011. The fourth phase EPPSE 3-16+ will report in 2013 having follow the sample to their post 16 destinations. The EPPSE website: www.ioe.ac.uk/projects/eppe gives further details about the study and the sample.

The EPPSE research adopts an educational effectiveness design using mixed methods including multilevel modelling for the analyses of child outcomes and case studies of effective practice. Earlier reports have documented the enduring impact of pre-school and the importance of early family experiences (particularly the Early years home learning environment [HLE]) on children’s later attainment and social/behavioural development up to age 11 in primary school (Sammons et al., 2007a; 2007b; Melhuish et al., 2008). In addition, during the pre-school phase the project explored the links between child outcomes and pre-school setting/classroom practices and processes through observations. This identified the features of pre-school experiences found to be linked with more positive developmental outcomes for young children up to age 5 years (see Sylva, 1999; Siraj-Blatchford, 2003; Sylva et al., 2006).

Aims
The aim of the first two presentations is three fold:
1 to explain the sample and methodology of the EPPSE study for those new to the project
2 to give a flavour for the ‘breadth’ of the research
3 to demonstrate how EPPSE monitors research ‘impact’ and how research findings have been used to inform the development of policy.

Part 1 EPPSE as a programme of research

Methodology
The original EPPSE research set out to investigate what impact on children’s cognitive and social/behavioural development. To this end 2,800 3-4 year old children (who attended pre-schools) were recruited to the study around 1997 (with another 300 who had no pre-school experience joining at age 5). The original sample was recruited from 141 pre-school settings in 5 ‘regions’ across England. Setting included nursery classes, private day nurseries, nursery schools, play groups, local authority day nurseries and combined/integrated centres. The sample has been followed up longitudinally through the use of the following research data sources:
- Child assessment (social/behaviour & cognitive) at 3, 4+, 6, 7, 10, 11, 14 and 16 years
- Family background at 3, 6 and 11 & 14
- Interviews/questionnaires with staff
- ‘Quality’ rating scales in pre-school
- Case studies of effective pre-school settings
- Measures of primary school academic effectiveness (value added)
- Pedagogical observations in primary school
School and classroom climate questionnaires
- Children’s views of school at age 7, 10 & 14
- Teachers’ views on school processes and practice in Yr 5 & Yr 9

During each phase of the study EPPSE has embraced ‘mixed methods’ combining quantitative research tools (multilevel modeling etc.) with qualitative approaches (interview analyses).

**EPPSE’s sub-studies**
During its 15 years EPPSE has grown from a single research project to a number of studies. The research team has been flexible in their approach to research and willing to undertake additional analyses as policy priorities have changed. During this expanded programme of research EPPSE has also studied:
- Special Educational Needs
- The Home Learning Environment at different time points
- Pedagogy in pre-school and primary school
- Transitions from primary to secondary school
- Children who succeed against the odds
- Resilience and vulnerability
- Promoting Equality in the Early Years
- Learning trajectories
- Pupil mobility
- Pupils’ perceptions and views of school
- Effective pre-schooling in Northern Ireland (EPPNI study).

The finding of these sub-studies has provided new insights into children’s attainment, progress and development. Only longitudinal studies can answer important research questions concerning the short, medium and long term effects of background characteristics and other variables (neighbourhood etc.) and how these change over time.

EPPSE continues until 2013 when all of the sample will have completed compulsory schooling and will have moved to their post 16 destinations.

**Selected key findings from the programme of research:**

**The pre-school period**
This study has demonstrated the positive effects of high quality pre-school provision on children’s intellectual and social/behavioural development. The EPPE research indicates that pre-school can play an important part in combating social exclusion and promoting inclusion by offering disadvantaged children, in particular, a better start to primary school. The findings indicate pre-school has a positive impact on children’s progress over and above important family influences. The quality of the pre-school setting experience as well as the quantity are both influential. The results show that individual pre-school centres vary in their effectiveness in promoting intellectual progress over the pre-school period, and indicate that better outcomes are associated with certain forms of provision. Likewise, the research points to the separate and significant influence of the early home learning environment. These aspects can be seen as more susceptible to change through policy and practitioner initiatives than other child or family characteristics, such as SES.

**Early Years Transition and Special Educational Needs (EYSEN study)**
This sub-study highlighted the importance of the early recognition of young children who may be ‘at risk’ of developing special educational needs (SEN). The EYSTEN study explored the characteristics of those children who, at the age of three, were already scoring below the mean on cognitive assessments. The study found that, at age 3, a third of the sample were ‘at risk’ of developing SEN. By age 5 this had reduced to a fifth of the sample. The research highlights the part early years education and care can play in improving children’s cognitive outcomes at when they start compulsory education at age 5.

**Pedagogy in pre-school and primary school**
The EPPE research provided the foundation for the Researching Effective Pedagogy in the Early Years (REPEY Siraj-Blatchford et al., 2002) project which investigated, through ‘thick
description’ of practice what where the day-to-day experiences of young children in effective and good settings. The research highlighted the importance of 5 key areas: the quality of the adult/child interactions (including the use of sustained shared thinking), practitioners’ knowledge of the curriculum, practitioners’ knowledge of child development, managing children’s conflicts and behaviour and supporting parents in enhancing children’s learning at home. The findings have contributed to the development of curriculum guidance for the Foundation Stage.

Transitions from primary to secondary school
This sub-study: ‘What makes a successful transition from primary to secondary school’ (Evangelou et al., 2008) investigated the transition of 550 of the EPPSE students. The research explored transition practices, key features of a successful transition which included the importance of ‘institutional adjustment’ and ‘curriculum interest and continuity’.

Resilience and vulnerability
The research team have explored ‘resilience’ and ‘vulnerability’ from a number of perspectives (see later work in this handout on Trajectories), one method has been to look at cumulative risk indices (Hall et al., 2008). In many studies of child development, the combined effect of multiple risks acting in unison has been represented in a variety of ways. This EPPSE investigation builds upon this preceding work and presents a new procedure for capturing the combined effect of multiple risks. A representative sample of 2,899 British children had their cognitive development measured at 36 and 58 months of age along with 10 potential risks during this period of development. Comparing a cumulative index of these risks against the previously undocumented alternative of confirmatory factor analysis using formative measurement, the EPPSE study found differences favouring the factor analysis. The factor analysis procedure demonstrated greater predictive power of children’s cognitive development while it systematically tested two of the assumptions implicit in cumulative risk indices.

Promoting Equality in the Early Years
This sub-study: Promoting Equality in the Early Years (The EPPE Team 2007) focused on the ‘attainment gap’ for different groups of children and what background characteristics influences this in terms of child (e.g. having English as an additional language etc.) and family (e.g. socio-economic status etc.) variables. It then goes on to consider what can help to improve the outcomes for disadvantaged children. Whilst not entirely ameliorating the impact of background factors it shows that good quality pre-school and a rich early years home learning environment can make significant differences to children’s outcomes.

Tracking and Pupil mobility
One of the main dangers of longitudinal research is the effects of sample attrition which can have a serious impact on the analyses and interpretation of findings. This sub-study (Melhuish et al., 2008) addresses means for reducing attrition in a longitudinal sample and explains the processes used to track the EPPE 3-11 sample from ages 3 to 11 years old. The methods to maintain the sample including sending birthday cards, regular newsletters have been successful in maintaining a good response rate to instruments and thus ensuring the strength of the data and the integrity of the analysis. Part of maintaining the sample is successful tracking procedures which is made more complex where there is high mobility amongst the members of the sample. In addition to tracking the EPPSE explored the impact of pupil mobility. The research explored the characteristics of mobile children for instance more advantaged families, defined in terms of mother’s highest qualification, were more likely to move during pre-school; and those eligible for free school meals (FSM) less likely to move during pre-school. Mobility during Key Stage 1 (KS1 - 5-7 years old) of primary school had the reverse characteristic: those more socially disadvantaged, in terms of FSM and those with absent fathers, were more likely to move during KS1. Mobility during Key Stage 2 (KS2 - 8-11 years old) was also typified by social disadvantage but not to the same degree as during KS1. It then went on to consider the impact of mobility on children’s cognitive attainment and progress and social/behavioural outcomes.
Part 2 Using research to inform policy and practice

The EPPE project has become well known for its contribution to ‘evidence based policy’ in early years education and care. Its findings are robust because they are based on sound and innovative research methods. The implications for policy of the EPPE project have been spelled out clearly and are being discussed – and acted upon – at national and local level. EPPE set out to contribute to the debate about the education and care of young children; the EPPE mixed-method research design targeted issues that could ‘make a difference’ to the lives of young children and their families.

Over the years EPPSE has monitored ‘impact’ through references to the research in ‘key’ documents. The following is illustrative of the types of policy relevant documentation which has cited EPPE as a source of evidence:

Strategies:

- DCSF (2009) Building Futures, Believing in Children: A focus on provision for Black children in the Early Years Foundation Stage. DCSF Nottingham

Reviews


Enquiries

- The House of Commons Session Education and Employment Committee Enquiry (Education Sub-Committee) Early Years. (2000), Minutes of Evidence. Wednesday 21st June 2000
- Frank Field Enquiry (2010), Independent Review of Poverty and Life Chances Whitehall
It has been argued that much of the success of EPPE is due to being in the ‘right place at the right time’ and it is undoubtedly true that the importance of timing cannot be overestimated in the extent to which research can have an influence on policy. However it is insufficient to just ‘push on an open door’ in order for the messages of research to be heard and acted upon. Some of the factors which may have contributed to the success of EPPE are summed up in the independent review of the research undertaken by the DfES in 2006. The report stated that EPPE was a valuable piece of educational research because it had:

- "….robust multi-level modelling, high response rates on data collection, low attrition rates, and contribution of in-depth qualitative evidence have all been important in enabling this degree of influence on policy and practice".
- "High volume of dissemination within central government, Parliamentary committees, local policymakers, practitioners, parents and academics, through conferences, seminars, briefings, the media and websites".
- "Flexible in carrying out additional analyses within short-term timescales, for example for Spending Reviews". (DFES Research Review 2006).

EPPSE continue to inform the debate on what influences children’s learning across their life course and will continue to do so till 2013.
Focus on the early years

Presenters:
Professor Edward Melhuish – Birkbeck College, University of London
Professor Kathy Sylva – University of Oxford

Paper 2
Abstract
The original Effective Provision of Pre-school Education (EPPE 1997-2003) project, funded by the Department for Education, focused on the impact of pre-school on children’s short and medium term cognitive and social/behavioural development. Two important strands in researching outcomes are the contribution of family and background characteristics (parent’s education, socio-economic status etc.) and pre-school characteristics (staff qualifications, pre-school quality) to children’s development. This paper reports on findings that are important in improving the educational experiences of children.

Research methods/or mapping the literature
EPPE combines a range of research methods for studying the quality of the child’s learning environment. This paper focuses on the early years home learning environment (HLE), developed from face-to-face interviews with over 3,000 parents (usually the mother) when their children were aged 3/5. A later HLE was developed at KS1 (age 6/7 years) from questionnaire data. By contrast, the pre-school environment was assessed via standardized assessments (Early Childhood Environment Rating Scales R and E) of the quality of pedagogical interactions and of learning resources. All in all, 141 pre-schools in the study were studied. Data from these sources was brought together to explore the effects of the HLE and pre-school quality, including how these might singly and together impact on child’s learning trajectories.

Analytical and/or theoretical framework
The analytic approach taken by EPPE uses multilevel models to identify experiences that lead to better outcomes for children. EPPE uses a school effectiveness or ‘value added’ approach to identify the contribution of background characteristics (HLE, SES etc.) in combination with the quality and effectiveness of the pre-school.

Research findings and/or contribution to knowledge
The findings on the HLE and the quality of pre-school have contributed to several important national initiatives including the Every Child Matter Agenda.

This paper will firstly describe findings related to child and family background characteristics to answer questions about the contribution of familial factors to outcomes including the construction and impact of the index of early years home learning activities. Secondly, it will describe the effects on children of pre-school and the factors associated with developmental gains.
Presentation 2 - Focus on the early years
Part 1: Edward Melhuish*, Kathy Sylva*, Pam Sammons*, Iram Siraj-Blatchford* and Brenda Taggart*
Part 2: Kathy Sylva*, Edward Melhuish*, Pam Sammons*, Iram Siraj-Blatchford* and Brenda Taggart*

Introduction
The Effective Provision of Pre-school Education (EPPE) project investigated the effects of pre-school education and care on children’s development (aged 3-7 year). EPPE collected a wide range of information on 3,000 children (from different social backgrounds) including developmental profiles (at ages 3, 4/5, 6 and 7 years), background characteristics related to their parents, the home learning environment, and the pre-school settings. Settings (141) were drawn from a range of providers (local authority day nurseries, integrated1 centres, playgroups, private day nurseries, nursery schools and nursery classes). A sample of 'home' children, (who had no or minimal pre-school experience) were recruited to the study at entry to school for comparison with the pre-school group.

The Aims of EPPE
EPPE explored five questions:
What is the impact of pre-school on children’s intellectual and social/behavioural development?
Are some pre-schools more effective than others in promoting children’s development?
What are the characteristics of an effective pre-school setting?
What is the impact of the home and childcare history on children’s development?
Do the effects of pre-school continue through Key Stage 1 (ages 6 and 7 years)?

Methodology
EPPE used the following sources of information: standardised child assessments taken over time, child social/behavioural profiles completed by pre-school and primary staff, parental interviews, interviews with pre-school centre staff, quality rating scales and case study observations and interviews. Many sources of data have been used in statistical analyses (using multi-level modeling) to explore the ‘value added’ by pre-school after taking account of a range of child, parent and home background factors. An important element in the study has been to ensure that fair comparison can be made between individual settings and types of provision. Similarly, the study has taken into account the contribution to children’s development of background factors such as birth weight, gender, parental qualification/occupations and the home learning environment. Only by taking account of background influences can fair comparison be made across settings.

Key findings over the pre-school period

- Child and family factors
  - Girls showed more co-operation/conformity, peer sociability and confidence and higher cognitive development scores. These results suggest that pre-school gender differences are precursors of later gender differences often found in school.
  - Children with health problems had lower cooperation/conformity and children with low birth weights and early developmental problems had lower cognitive scores.
  - Children with early behaviour problems had lower cooperation/conformity, peer sociability and confidence, and increased anti-social behaviour as reported by their pre-school carers.
  - The effects on cognitive development of belonging to a particular ethnic group are primarily mediated by language. Several ethnic groups showed lower cognitive scores than the White UK group. An analysis of non-verbal scores showed no effects for whether English was a first

1 'Integrated' settings fully combine education and care and are referred to as 'combined' centres in some EPPE Technical Papers.
language and all ethnic group effects except one disappeared. Those children of Bangladeshi heritage had lower non-verbal scores than children of White UK heritage.

-Family socio-economic status showed effects for both cognitive attainment and cooperation/conformity. For these variables the children of professional parents were rated more highly than other children.

-Mother’s age had a small effect upon the amount of anti-social behaviour. Children with very young mothers tended to be rated higher for anti-social behaviour than other children.

-For cognitive development, a two-parent family, higher socio-economic status and mother’s qualifications were all significantly related to higher outcomes.

- Family size was found to be significant. ‘Singleton’ children were rated higher on anti-social behaviour than children with siblings. Children with one or two siblings scored higher on cooperation/conformity. Children with three or more siblings scored lower on peer sociability and confidence. For social/behavioural development, having one or two siblings but not more, was most advantageous. Children with three or more siblings scored lower on cognitive development.

- **The importance of home learning**
  - For all children, the quality of the home learning environment is more important for intellectual and social development than parental occupation, education or income. What parents do is more important than who parents are.

- **Impact of attending a pre-school**
  - Pre-school experience, compared to none, enhances all-round development in children.
  - Duration of attendance (in months) is important; an earlier start (under age 3 years) is related to better intellectual development.
  - Full time attendance led to no better gains for children than part-time provision.
  - Disadvantaged children benefit significantly from good quality pre-school experiences, especially where they are with a mixture of children from different social backgrounds.
  - Overall disadvantaged children tend to attend pre-school for shorter periods of time than those from more advantaged groups (around 4-6 months less).

- **Does type of pre-school matter?**
  - There are significant differences between individual pre-school settings and their impact on children, some settings are more effective than others in promoting positive child outcomes.
  - Good quality can be found across all types of early years settings; however quality was higher overall in settings integrating care and education and in nursery schools.

- **Effects of quality and specific ‘practices’ in pre-school**
  - High quality pre-schooling is related to better intellectual and social/behavioural development for children.
  - Settings that have staff with higher qualifications have higher quality scores and their children make more progress.
  - Quality indicators include warm interactive relationships with children, having a trained teacher as manager and a good proportion of trained teachers on the staff.
  - Where settings view educational and social development as complementary and equal in importance, children make better all round progress.
  - Effective pedagogy includes interaction traditionally associated with the term “teaching”, the provision of instructive learning environments and ‘sustained shared thinking’ to extend children’s learning.
Key findings at the end of Key Stage 1

- **Lasting effects**
  - The beneficial effects of pre-school remained evident throughout Key Stage 1, although some outcomes were not as strong as they had been at school entry.

- **Duration and quality**
  - The number of months a child attended pre-school continued to have an effect on their progress throughout Key Stage 1, although this effect was stronger for academic skills than for social/behavioural development.
  - At age 7 the relationship between quality of pre-school and academic attainment was somewhat weaker but still evident, and the effect of quality on social/behavioural development was no longer significant. High quality pre-school provision combined with longer duration had the strongest effect on development.

- **Effective settings**
  - Individual pre-schools varied in their ‘effectiveness’ for influencing a child’s development. The advantages for a child’s development of attending a particularly ‘effective’ pre-school centre persists up to age 7. Of course this does not mean that contemporaneous experiences at primary school have no impact on children’s lives – only that the individual pre-schools attended continued to have an influence.

- **Vulnerable children**
  - Multiple disadvantage continued to have a negative effect on intellectual and social development up to the end of Key Stage 1.

- **Home learning environment**
  - The effect of home learning activities during the pre-school period continues to be evident in children’s developmental profiles at the end of Key Stage 1.

Part 1 - The impact of the home learning environment on children’s outcomes

Interviews were conducted with parents when their child entered the study. These were used to collect detailed information about childcare histories, characteristics of children, their families and home environments. This wealth of information has enabled the research study to investigate some of the influences affecting young children that have a significant relationship with their later intellectual and social/behavioural development. These factors clustered around demographic influences and the home learning environment.

What parents/carers do makes a real difference to young children’s development. The EPPE project developed an index to measure the quality of the home learning environment (HLE). There are a range of activities that parents undertake with pre-school children which have a positive effect on their development. For example, reading with the child, teaching songs and nursery rhymes, painting and drawing, playing with letters and numbers, visiting the library, teaching the alphabet and numbers, taking children on visits and creating regular opportunities for them to play with their friends at home, were all associated with higher intellectual and social/behavioural scores. These activities could also be viewed as ‘protective’ factors in reducing the incidence of SEN because children whose parents engaged regularly in home learning activities were less likely to be at risk for special educational needs. The HLE was only moderately associated with parents’ educational or occupational level and was more strongly associated with children’s intellectual and social development than either parental education or occupation. In other words what parents do with their children is more important than who parents are. Poor mothers with few qualifications can improve their children’s progress and give them a better start at school by engaging in activities at home that engage and stretch the child’s mind. This EPPE finding underpins the work in programmes such as Local Sure Start and Children’s Centres that target areas of high social disadvantage.
EPPE demonstrated a strong relationship between children’s outcomes and parental factors but this was somewhat weaker for child social/behavioural development than for cognitive development. Few large-scale research studies have been able to explore the very wide range of background factors considered in the EPPE study, especially daily activities in the home.

The findings indicate that there is a strong relationship between a child and family background characteristics at entry to pre-school but this reduces (though is still strong) by the time a child enters primary school. This indicates that pre-school, whilst not eliminating differences in social backgrounds, can help to reduce the disadvantage children experience from some social groups and can help to reduce social exclusion.

Part 2 – The impact of pre-school on children’s outcomes.

Duration of pre-school and timing of entry
A child’s duration at pre-school (measured in months) was related to their intellectual gains at school entry and again at the end of Key Stage 1 (KS1). An early start at pre-school (between 2 and 3 years) was also linked with better intellectual attainment and being more sociable with other children (Peer sociability). The benefits of an early start continue to be evident at the end of KS1. There was evidence that an early start in group settings, particularly before the age of 2, led to slightly increased behaviour problems for a small group of children when they were 3 and again at 5. There was no evidence that full-day attendance led to better development than half-day attendance. The slightly increased risk of anti-social behaviour seen in a small group of children starting pre-school before age 3 can be reduced by high quality pre-school in the period 3-5 years.

Effect on different groups of children
Pre-school was particularly beneficial to children who are more disadvantaged. One in three children were ‘at risk’ of developing learning difficulties at the start of pre-school, however, this fell to one in five by the time they started school\(^2\). This suggest that pre-school can be an effective intervention for the reduction of special educational needs (SEN), especially for the most disadvantage and vulnerable children.

Quality effects
Observations on the quality of each setting, using standardised rating scales, showed a significant link between higher quality and better intellectual and social/behavioural outcomes at entry to school. The quality of the interactions between children and staff were particularly important; where staff showed warmth and were responsive to the individual needs of children, children made more progress. Pre-school quality was significantly related to children’s scores on standardised tests of reading and mathematics at age 6. At age 7 the relationship between quality and academic attainment was somewhat weaker but still evident, and the effect of quality on social/behavioural development was no longer significant. High quality pre-school provision combined with longer duration had the strongest effect on development.

Quality and staff qualifications
Quality makes a difference to children’s development. There was a significant relationship between the quality of a pre-school centre and improved child outcomes. There was also a positive relationship between the qualifications of staff and ratings of quality. Children made more progress in pre-school centres where staff had higher qualifications, particularly if the manager was highly qualified. Having trained teachers working with children in pre-school settings (for a substantial proportion of time, and most importantly as the curriculum leader) had the greatest impact on quality, and was linked specifically with better outcomes in pre-reading and social development at age 5.

\(^2\) See the Early Transition and Special Education Needs (EYTSEN) Institute of Education, for more detail on SEN in the early years.
Type of pre-school
Even after taking account of a child’s background and prior intellectual skills, the type of pre-
school a child attends has an important effect on their developmental progress. Integrated
centres that fully combine education with care and have a high proportion of trained teachers,
along with nursery schools, tend to promote better intellectual outcomes for children. These
setting also had the highest quality scores. Similarly, fully integrated settings and nursery
classes tend to promote better social development even after taking account of children’s
backgrounds and prior social behaviour.

Revealing practice through 12 Case Studies
EPPE conducted case studies in 12 centres identified in the middle and upper range of
effectiveness. ‘Effectiveness’ was based on the amount of progress children made at each
centre, after controlling for pre-test and social background. The case studies explored the
practices that might explain why children fared so well in some of them. The case studies
identified six areas that are particularly important when working with children aged 3 to 5 years.
1. The quality of adult-child verbal interactions. More ‘sustained shared thinking’ was observed
   in settings where children made the most progress. It was more likely to occur when children
   were interacting 1:1 with an adult or with a single peer partner. Staff engaged in open-ended
   questioning in the settings where children made the most progress and provided formative
   feedback to children during activities.

2. Initiation of activities. In effective settings, the balance of who initiated the activities, staff or
   child, was about equal. Similarly in effective settings the extent to which staff members
   extended child-initiated interactions was important.

3. Knowledge and understanding of the curriculum. Pre-school workers’ knowledge of the
   particular curriculum area that is being addressed is vital. Curriculum knowledge is just as
   important in the early years as it is at any later stage of education

4. Knowledge about how young children learn: The knowledge of child development underpins
   sound practice but is often weak among early years staff. This gap could be reduced
   through initial training and continuous professional development. Staff, need a good grasp of
   the appropriate pedagogy for a child’s understanding and interests to develop fully.

5. Adult skills to support children. Qualified staff in the most effective settings provided children
   with more curriculum-related activities (especially language and mathematics) and they
   encouraged children to engage in challenging play. The most highly qualified staff also
   provided the most instruction, and were the most effective in their interactions with the
   children, using the most sustained shared thinking. Less qualified staff were significantly
   better at supporting learning when they worked with qualified teachers.

6. There were more intellectual gains for children in centres that encouraged high levels of
   parent engagement in their children’s learning. The most effective settings shared child-
   related information between parents and staff, and parents were often involved in decision
   making about their child’s learning programme. More particularly, children did better where
   the centre shared its educational aims with parents. This enabled parents to support children
   at home with activities or materials that complemented those experiences in the Foundation
   Stage.

7. The most effective settings adopted discipline/behaviour policies in which staff supported
   children in rationalising and talking through their conflicts. In settings that were less effective
   in this respect, our observations showed that there was often no follow up on children’s
   misbehaviour and, on many occasions, children were ‘distracted’ or simply told to stop.
Focus on primary schools

Presenters:
Professor Iram Siraj-Blatchford – Institute of Education, London
Professor Pam Sammons – University of Oxford

Paper 3
Abstract
This paper illustrates how a mixed methods study innovatively uses quantitative findings to explore associations between practices and outcomes and how qualitative investigations add depth to these findings. EPPE administered two observational instruments (Pianta – COS-5 and Stipek - IEO) in 125 primary schools, selected on the basis of their academic residual scores and quality ratings of their practice and pedagogy. Analyses was conducted on the observational numerical ratings as well as qualitative data on what the teachers were actually doing to support academic (in)effectiveness.

Research methods/or mapping the literature
A subsample of schools was selected on the basis of their academic effectiveness (residual) scores derived from analyses of all primary schools in England across three years. Observational and field notes data was then qualitatively analysed. Quantitative ratings were matched with outcome and ‘other’ data to look at variations and the broad characteristics of more/less effective settings. The qualitative data explore in depth pedagogical strategies used in high, medium and low effectiveness schools. The paper will explore the contested definition of pedagogy.

Analytical and/or theoretical framework
The quantitative study adopted a multilevel model approach to identifying the relationships between child outcomes, background factors and classroom/school practices. The qualitative analyses built on observer’s field notes and explored these in relation to the research literature on primary school pedagogy (including national and international studies on successful pedagogical strategies). These were then further explored in relation to the school’s residual effectiveness rating.

Research findings and /or contribution to knowledge
The findings of this these different approaches to studying effective classroom/school practices illustrate the important of mixed methods and longitudinal research to illuminate the complexity of improving outcomes for children. Both analyses produce findings of relevance for practitioners and policy makers concerning topics such as behaviour management, classroom climate, quality of teaching, use of plenary etc.

This paper investigates five topics:
- the extent of variations in teacher and pupil observed behaviours in Year 5 class rooms?
- relationships between different classroom practices and children’s outcomes
- associations between outcomes and teacher and school characteristics
- characteristics of primary schools which are more/less academically effective?
- pedagogical strategies applied in high, medium and low academically effective primary schools?

practices associated with more effective pedagogy
Presentation 3 - Focus on primary schools

Part 1 – Pam Sammons*, Kathy Sylva*, Edward Melhuish*, Iram Siraj-Blatchford*, Brenda Taggart*, Sofka Barreau* and Yvonne Grabbe*
Part 2 - Iram Siraj-Blatchford*, Donna-Lynn Shepherd*, Edward Melhuish*, Brenda Taggart*, Pam Sammons*, Kathy Sylva*


Introduction

A number of school and teacher effectiveness studies have drawn attention to the importance of classroom experience in accounting for variations in pupil outcomes (see Scheerens and Bosker 1997; Teddlie and Reynolds 2000; McCaffrey et al., 2004; Muijs & Reynolds, 2005). Models of educational effectiveness have drawn particular attention to the importance of the classroom and variations in teacher behaviour and practice in accounting for differences in students’ progress and development (Galton et al., 1999; Creemers & Kyriakides, 2007). In order to investigate the role of classroom experiences in shaping children’s academic and social/behavioural outcomes, more detailed investigations were conducted focusing on Year 5 classes. This year was selected because the classrooms were thought to be more ‘typical’ of Key Stage 2 because of the absence of national assessments in this year.

Methodology

Classroom observations were carried out in 125 classrooms (over two years: Summer 2004, Summer 2005) selected for the number of EPPE 3-11 children and located in schools and representation of a wide range of value added academic effectiveness scores. The Classroom Observation System for Fifth Grade (COS-5, Pianta) was administered in the full sample of 125 focal schools and the Instructional Environment Observation Scale (IEO, Stipek) in a sub-sample of 93 of them. Observations were conducted in a range of lessons by trained researchers with a particular emphasis on lessons in the core subjects. The information from the observations and teachers questionnaires were investigated in the light of ‘other’ sources of data such as school effectiveness measures (Contextual Value Added) and Office for Standards in Education (Ofsted) inspection judgments.

Box 1: Underlying Dimensions for the COS-5 (Pianta)

<table>
<thead>
<tr>
<th>Quality of pedagogy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Classroom codes - Richness of instructional method</td>
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<tr>
<td>2. Classroom codes - Detachment/Teacher</td>
</tr>
<tr>
<td>3. Classroom codes - Positive classroom climate</td>
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<tr>
<td>4. Classroom codes - Productive use of instructional time</td>
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<td>5. Classroom codes - Evaluative Feedback</td>
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<tr>
<td>6. Classroom codes - Teacher Sensitivity</td>
</tr>
<tr>
<td>Disorganisation</td>
</tr>
<tr>
<td>1. Child codes - Disruptive</td>
</tr>
<tr>
<td>2. Classroom codes - Chaos</td>
</tr>
<tr>
<td>3. Classroom codes - Negative classroom climate</td>
</tr>
<tr>
<td>Child positivity</td>
</tr>
<tr>
<td>1. Child codes - Self-Reliance</td>
</tr>
<tr>
<td>2. Child codes - Sociable/co-operative with peers</td>
</tr>
<tr>
<td>3. Child codes - Child-Teacher Relationship</td>
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<tr>
<td>Positive engagement</td>
</tr>
<tr>
<td>1. Child codes - Positive Affect</td>
</tr>
<tr>
<td>2. Child codes - Activity level</td>
</tr>
<tr>
<td>Attention and control</td>
</tr>
<tr>
<td>1. Child codes - Attention</td>
</tr>
<tr>
<td>2. Classroom codes – Over-Control</td>
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</tbody>
</table>
Data from the Literacy and Numeracy scales of the IEO instrument were analysed separately for 93 classrooms see Box 2 below.

Box 2: Underlying dimensions for the IEO (Stipek)

<table>
<thead>
<tr>
<th>Literacy</th>
<th>Numeracy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Pedagogy</strong></td>
<td><strong>1. Subject development</strong></td>
</tr>
<tr>
<td>1. Classroom climate</td>
<td>1. Use of Maths analysis</td>
</tr>
<tr>
<td>2. Classroom routines</td>
<td>2. Depth of knowledge and student understanding</td>
</tr>
<tr>
<td>3. Social support for student learning</td>
<td>3. Basic skill development in the context of problem solving</td>
</tr>
<tr>
<td>4. Student engagement</td>
<td>4. Maths discourse and communication</td>
</tr>
<tr>
<td>5. Instructional conversations</td>
<td>5. Locus of Maths authority</td>
</tr>
<tr>
<td><strong>2. Subject development</strong></td>
<td></td>
</tr>
<tr>
<td>1. Higher Order Thinking (HOT) in writing</td>
<td></td>
</tr>
<tr>
<td>2. Purposeful development of writing skills</td>
<td></td>
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<tr>
<td><strong>3. Learning linkages</strong></td>
<td></td>
</tr>
<tr>
<td>1. Cross-Disciplinary connections</td>
<td></td>
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<tr>
<td>2. Linkage to life beyond the classroom</td>
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</tbody>
</table>

Aims
The largely quantitative analyses probed the:

Part 1
- variation in teachers and pupil behaviours in Year 5 classrooms and
- influence of school and teaching quality on children’s progress in primary school.

This work was completed in 2008. During 2010/11 the field notes from the observations were reanalyzed, using qualitative data reduction techniques to provide

Part 2
- more ‘thick’ descriptions of the practices which differentiated excellent, good and poor schools.

This sub-study was called the Effective Primary Pedagogical Strategies in English and Mathematics (EPPSEM) in Key Stage 2: A study of Year 5 classroom practice from the EPPSE 3-16 longitudinal study. Both analyses are reported on in this presentation.

Part 1 – The variation in teachers and pupil behaviours in Year 5 classrooms and the influence of school and teaching quality on children’s progress in primary school.

Before discussing the results and analyses of primary schools it needs to be noted that not only were there pre-school effects still evident on pupil’s outcomes at the end of KS2 but there were also significant interactions between pre-school and primary school. There were also a significant number of child, family and HLE factors which remained important at the end of the primary school period. They are not the focus on this presentation. Those interested in background demographics should consult the EPPSE website [http://eppe.ioe.ac.uk](http://eppe.ioe.ac.uk) for a full list of EPPSE outputs.

Pre-school and primary school interactions
- The combination of attending a higher quality pre-school and an academically effective primary school had measurable benefits for pupils’ cognitive development, especially in Mathematics. High quality pre-school seems to provide some ‘protection’ against the disadvantage of attending an ineffective primary school.
- Attending a more academically effective primary school was most important for pupils who had not attended any pre-school or had experienced only low quality pre-school. These will be discussed during the presentation.
The contribution of primary schools to pupils' development

The overall academic effectiveness of the primary school attended by EPPE children (independently measured using national value added indicators) had a positive influence on both English and Mathematics attainment and progress (between age 7 and 11).

- Attending a primary school high on academic effectiveness showed particular benefits for children with multiple disadvantaged backgrounds in terms of English and Mathematics attainment and also for children of low qualified mothers for Mathematics attainment.

- Primary school academic effectiveness did not have a statistically significant effect on children's social/behavioural outcomes for the whole sample, but some disadvantaged sub-groups had better social/behavioural outcomes if they attended a highly academically effective school.

Key findings on classroom practices and the school context

- There was significant variation in both teachers' classroom practice and pupils' behaviour in different Year 5 classes.

- Levels of student engagement were found to be relatively high and classroom climates were generally positive. Teacher detachment and levels of pupil ‘off task’ behaviour were generally low.

- There was considerable variation in the quality of the educational experiences of children in different classes.

- Most teachers broadly followed the format of the National Strategies (Literacy and Maths) except for the use of the plenary which was not observed in nearly half of classes.

- The quality of teaching and pupil response was found to be consistently higher in classes where a plenary was used in both literacy and numeracy lessons and lowest in classes where no plenary was used in either subject.

- The incidence of poor pupil behaviour and classroom disorganisation was observed to be greater in schools with higher levels of social disadvantage, measured by the percentage of pupils eligible for free school meals (FSM). The quality of pedagogy was also found to be poorer in schools with higher levels of social disadvantage.

- Observed practice was found to be better in schools that had been rated more positively by Ofsted Inspectors in earlier inspections (particularly in schools rated more highly on overall leadership and school effectiveness). This suggests that the practice of Year 5 teachers in more effective schools is related to the overall quality of the school and its leadership.

The contribution of primary schools to children's development

The academic effectiveness of the primary school between KS1 and 2 was measured by analysing National assessments using a value added approach (Melhuish et al., 2006). Attending a more academically effective school was found to have a positive influence on the EPPE 3-11 pupils’ English (ES=0.24) and particularly Mathematics outcomes (ES=0.38). Not only was the effectiveness of the school linked to pupils’ absolute attainment at age 11, it also predicted the amount of progress the EPPE 3-11 pupils made between the ages of 7 and 11.

For social/behavioural outcomes, the academic effectiveness of the school did not show a significant effect across all pupils. However, certain groups of pupils, such as those with SEN or whose mothers had low educational qualifications, showed significantly better social/behavioural outcomes if they attended schools that were more academically effective (ES from 0.33 to 0.37).

Key findings on the influence of school and teaching quality on children's progress

- There was considerable variation in the overall Quality of Teaching observed in Year 5 and it was a significant predictor of better progress in both Reading and Mathematics at age 10.

- Two components of teaching quality, The Quality of Pedagogy and Classroom Control, were particularly important for progress in Mathematics and the Quality of Pedagogy was also predictive of better social/behavioural outcomes between age 6 and 10. However, raised levels of Disorganisation in class predicted poorer progress in English and Mathematics and increased ‘Hyperactivity’.

- Teachers' reports of a number of features of school context and processes were also
significant predictors of better academic and social/behavioural outcomes (e.g. Use of homework and school standards, School communication with parents and Parental support of their child’s learning).

- Measures of overall school quality obtained from Ofsted inspection judgements (‘effectiveness’ and ‘improvement since previous inspection’) predicted better cognitive and social/behavioural child outcomes in Year 5.

Classroom and school processes
There was considerable variation in the quality of EPPE 3-11 pupils’ educational experiences during Year 5 (Summer 2004, Summer 2005) as observed by EPPE researchers. Overall Teaching quality was a significant predictor of greater cognitive progress between ages 6 and 10: Reading (ES=0.37) and Mathematics (ES=0.35). The Quality of Pedagogy and Classroom Control were significant for progress in Mathematics (ES=0.27) and Quality of Pedagogy was also related to reduced ‘Hyperactivity’ (ES=0.28) and better ‘Pro-social’ behaviour (ES=0.27) and ‘Self-regulation’ (ES=0.27). High levels of classroom Disorganisation predicted poorer progress in both Reading (ES=0.21) and Mathematics (ES=0.34) and increased ‘Hyperactivity’ (ES=0.37).

Classroom and school processes

Teachers’ reports (by questionnaire) of their school context and processes (particularly the five factors concerning Use of homework and school standards, Pupils’ agency and voice, Anti-academic ethos, School communication with parents, and Parental support of their child’s learning) were related to better progress in Mathematics and social outcomes (ES from 0.27 to 0.38) at age 10. In schools where teachers reported active School communication with parents, pupils made better academic progress in Reading (ES=0.38) and Mathematics (ES=0.34), and showed better ‘Self-regulation’ (ES=0.27). In addition, where teachers reported strong Parental support for their child’s learning, pupils made better progress in Reading (ES=0.28) and ‘Pro-social’ behaviour (ES=0.38).

The Ofsted inspection measure of overall School effectiveness was a moderately strong predictor of pupil progress in Mathematics (ES=0.41) and ‘Self-regulation’ (ES=0.39) whilst the judgement on the Quality of school leadership showed a positive relationship with Mathematics progress (ES=0.32). Ofsted’s judgement of a school’s Improvement since last inspection was a significant predictor of EPPE 3-11 pupils’ Mathematics progress (ES=0.35), and development in ‘Self-regulation’ (ES=0.49), ‘Pro-social’ (ES=0.43) and ‘Anti-social’ behaviour (ES=0.31).

Part 2 – Effective Primary Pedagogical Strategies in English and Mathematics (EPPSEM) in Key Stage 2: A study of Year 5 classroom practice from the EPPSE 3-16 longitudinal study.
Previous EPPE analysis (see above) identified significant variation in teachers’ classroom practice and pupils’ behaviour in Year 5 classes and that this predicts children’s later achievement. The EPPSEM sub-study explored the differences between poor, average and excellent teachers, through observation of teaching practice and linking this to the effectiveness of schools. This involved additional analysis of observations in 82 year 5 classrooms which were originally observed during the Spring and Summer terms of 2004 and 2005.

Key Findings
There are significant differences in the strategies used by teachers in excellent, good and poor schools. There is a ‘bundle’ of behaviours that, taken together, can make a difference to children’s development and progress and therefore their later life chances.

Year 5 teachers in excellent schools (defined as those which are academically effective with good quality pedagogy):

- **Have organisational skills**: teachers share clear learning objectives with their pupils, ensure all pupils understand the objectives and associated concepts, have extremely well-organised resources and well-established classroom routines.
• **Establish a positive classroom climate**: relationships between children and between adults and children are characterised by a sense of liking and mutual respect, classrooms are happy places, children are less disruptive and behaviour management is handled sensitively.

• **Personalise their teaching**: teachers are sensitive to the needs and interests of their pupils, provide a variety of resources to suit the individuals in their classes, are more likely to make explicit the links between learning in the classroom and the world outside the classroom and provide homework directly linked to what children are learning in their lessons.

• **Use dialogic teaching and learning**\(^1\). Children work collaboratively, take part in instructional conversations in Literacy, have opportunities to receive evaluative feedback and spend more time learning and performing analysis. In Maths, these teachers use analysis and maths discourse, share maths ‘authority’\(^2\) with the children and their pupils have greater depth of knowledge and understanding.

• **Make more frequent and better use of the plenary**: teachers in the best schools are about twice as likely as teachers in poor schools to use a plenary and they use it to provide feedback and to allow further discussion, exploration and extension.

Overall 11 pedagogical strategies were identified which differentiated excellent, good and poor schools as follows:

**Findings for each of the Pedagogical Strategies**

1. **Organisation**
   Teachers in excellent and good schools wasted no time. Classroom routines were efficient and smooth. Children were responsible for their own time and resources: they knew what to do and they did it. Resources were prepared ahead of time, well-managed during lessons, were particularly fit-for-purpose and tailored to the individual needs of their pupils. They made productive use of instructional time by maintaining good pace. Pupils in these classes had the highest ratings of self-reliance. Teachers in poor schools scored lower on how well they organised resources and how fit for purpose they were, use of instructional time, clarity of the teacher’s expectations and the children’s independence and self-reliance. Lessons were slow to start, pace was not maintained and time was wasted during transitions. Pupils in these classes received the lowest ratings of self-reliance.

2. **Shared objectives**
   Teachers in excellent and good schools ensured that the concepts and ideas presented in lessons were understood by all children. They checked that children understood the main ideas of the lesson, intervened when understanding was not clear or complete and did this even when it meant changing the lesson or activity part way through. Although most teachers were good at making sure the learning intentions of each lesson and activity were clear to the children (for example, by writing lesson objectives on the board), teachers in excellent schools were especially good at this. Pupils in these classes were very clear about what they were expected to achieve and how much time they had to do it in. In poor schools objectives and learning concepts and ideas were less clear. Teachers were slow to check pupils’ understanding of key concepts and ideas.

3. **Homework**
   Teachers in excellent and good schools appeared to set homework that was more meaningful and more directly linked to what the children were learning. They had a more flexible approach to setting work for example, they were more likely to make use of spontaneous learning opportunities that arose within lessons. In poor schools, teachers set homework simply

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\(^1\) “Dialogic teaching is an approach to teaching which in a highly disciplined fashion harnesses the power of talk to stimulate and extend pupils’ thinking and advance their learning and understanding” (Alexander, 2011, http://www.robinalexander.org.uk/dialogicteaching.htm)

\(^2\) Sharing maths authority means that the children, and not just the teacher, can be the leaders and experts on maths questions and concepts.
because they were required to set it and the work itself did not appear to be expressly linked to what the children were learning in class.

4. **Classroom climate**
Classrooms in excellent schools were rated exceptionally highly on positive classroom climate. Children were well-liked and respected by their peers. The overall classroom climate in poor schools was often rated as unpleasant. Teachers were more likely to display negativity (disapproval, reprimands, expression of teacher’s dislike, etc) and children in poor schools were less sociable and less cooperative than those in other schools.

5. **Behaviour management**
Children in excellent and good schools were less disruptive and rarely needed to be disciplined. Where teachers did need to correct behaviour, they used humour or a quiet reminder. Although levels of indiscipline were also generally low in poor schools, children in these schools were more disruptive and teachers disciplined them more frequently. Discipline was often public and sometimes involved threats, personal attacks, shaming or belittling children.

6. **Collaborative learning**
Children in excellent schools spent the most time overall in collaborative learning situations, although this was not a common practice in most classrooms.

7. **Personalised teaching and learning**
Teachers in excellent and good schools were more likely to personalise their pupils’ learning experiences by being sensitive to the individual needs and by providing learning materials that were rich and varied. They were rated as very low in teacher detachment and high when providing social support for student learning in literacy. Teachers in excellent schools were exceptionally sensitive to the needs of the children and provided learning materials specifically chosen and adapted for their pupils. Teachers in poor schools provided teaching and learning resources that were less varied and differentiated, they were less sensitive to their pupils’ individual needs and more detached from their learning experiences.

8. **Making Links Explicit**
On the whole there were few instances of teachers making extra and cross-curricular links explicit. Teachers in excellent schools were better able to and more consistent at making links to areas outside the specific lesson. Teachers in poor schools rarely connected their lessons and activities with other subjects or with areas outside the classroom or school.

9. **Dialogic Teaching and Learning**
The extent of dialogic teaching (Alexander 2011) showed few differences between the three groups (excellent/good/poor), except in Numeracy where teachers in excellent schools received the highest ratings on using dialogic teaching and learning. Teachers in excellent and good schools were rated significantly higher on dialogic teaching for their use of analysis in maths and in the depth of their pupils’ knowledge and understanding. They were also rated more highly on maths discussion and communication and on sharing the locus of Maths authority. In Literacy, they were rated higher on instructional conversations. Children in poor schools spent less time learning and carrying out analysis, their teachers were less likely to encourage discussion, analysis and depth of understanding of maths concepts or to share responsibility for learning with children or to support and promote discussion for deeper understanding in literacy.

10. **Assessment for Learning (AFL)**
Teachers in excellent schools provided greater opportunities for their pupils to reflect on their learning through review than teachers in both good and poor schools.

11. **Plenary**
Teachers in excellent and good schools were found to have included plenaries in their lessons almost twice as often as those in poor schools. They used the plenary to provide opportunities for further discussion, to explore issues in depth. In poor schools, a plenary session was often not included at the end of the lesson and when it was, was most likely to be an opportunity for children to check their answers rather than an opportunity to deepen understanding.
Focus on pupil’s learning trajectories and success against the odds

Presenters:
Professor Iram Siraj-Blatchford – Institute of Education, London
Professor Edward Melhuish – Birkbeck College, University of London

Abstract
Many studies have documented the relationship between socio-demographic factors (e.g. Socio-Economic Status) and children’s academic achievement. While factors such as SES, ethnicity etc. will often differentiate children, students will differ in how they react to the learning experiences, pressures and constraints that they face. Consequently, for any given social group there will be variation in the kinds of pathways students follow, despite the relative homogeneity of their demographic backgrounds.

Research questions/focus of the enquiry
The key questions are how:
- families shape the educational outcomes of resilient and vulnerable children
- schools and teachers enhance or neglect the promotion of children’s academic and social potential -leading to resilience or vulnerability;
- factors, external to school and family, influence children’s views of themselves as learners;
- vulnerable and resilient children and their parents view their experiences.

Research methods/or mapping the literature
Two studies are reported, based on
a) quantitative data analyses of the trajectories of the full EPPSE sample of children and
b) qualitative case studies of 50 carefully selected child and family cases where children have trajectories which show that they are succeeding against the odds. The work has been embedded within the extant literature on protective and risk factors and learning.

Research findings and/or contribution to knowledge
Developmental contexts such as the home, parenting, pre-school or school can influence learning trajectories. Quantitative analysis of trajectories in literacy and numeracy (age 3 – 11) indicate that the early home learning environment (HLE) and pre-school effectiveness are important as well as a child’s level of self-regulation. The qualitative analyses provide information that can be of use to both policymakers and practitioners and has implications for parenting through findings on cultural capital and home-school relations that illuminate ways that the gap between those academically and socially advantaged and disadvantaged may be addressed.

This paper illustrates how mixed method, longitudinal research can illuminate why some children from disadvantaged backgrounds have better outcomes than might be predicted from their family circumstances.
Presentation 4: Focus on pupil's learning trajectories and success against the odds
Part 1: Edward Melhuish#, Kathy Sylva*, Pam Sammons*, Iram Siraj-Blatchford* and Brenda Taggart*
Part 2: Iram Siraj-Blatchford*, Donna-Lynn Shephard*, Edward Melhuish#, Brenda Taggart*, Pam Sammons* and Kathy Sylva*

Introduction
The Effective Pre-school, Primary and Secondary Education (EPPSE) study has shown how early experience such as the quality and effectiveness of pre-school, primary school and the early home learning environment (HLE) can be critical in distinguishing those pupils (between the ages of 5 and 11) with a given level of social-economic resources who progress well in terms of educational and social achievement from those who do not (Melhuish et al., 2008a, Sammons et al., 2008). These two presentations considers how developmental contexts can influence educational pathways and provide children with experiences that can be a source of resilience or vulnerability in educational development.

The presentations consider ‘resilience’ and ‘vulnerability’ – educational attainment beyond (resilience) or below (vulnerability) that expected on the basis of personal and social circumstances. While factors such as SES, ethnicity, and gender often differentiate children, even those having similar characteristics will differ in how they react to learning experiences. So, there will be variation in the pathways followed, despite the relative homogeneity of students’ backgrounds. Some students manage positive educational pathways despite adverse conditions, while others flounder despite circumstances that might suggest more positive outcomes. These students are interesting because they represent individuals who did not follow a predicted pathway, leading to the question of why this occurs. This is important if we wish to understand patterns of educational achievement and what constitutes protective factors leading to resilience or risk factors leading to vulnerability.

In keeping with EPPSE’s mixed method approach to research the two trajectories analyses presented draws on both research paradigms.

Methodology
Two studies are reported, based on Part 1 quantitative data analyses of the trajectories of the full EPPSE sample of children. This exploratory analysis considers the data on children’s level of performance in terms of ‘above expectation’, ‘as expected’ or ‘below expectation’ for each child in the study. The SAS PROC TRAJ programme was used to calculate trajectories over time (Jones, Nagin, & Roeder, 2001) to produce ‘best fit’ models. This presentation will consider what impacts on ‘group’ trajectories within statistical models.

Part 2 qualitative case studies of 50 children and their families. Individual-level residual scores showing the differences between predicted and obtained achievement for English and Maths up to age 11 were created for each child in the EPPSE sample using multilevel modeling. Four groups of interest were then created that provided a framework for the selection of 50 case studies. The 4 groups represent: two with low SES children Group 1, n=20, academically successful children who were ‘succeeding against the odds’ Group 2, n=15, vulnerable children who were ‘expected low achievers’ and two groups of high SES children Group 3, n=9, vulnerable children who were ‘unexpected underachievers’ Group 4, n=6, academically successful children who were ‘expected high achievers’. The sample consists of 24 girls/26 boys; 23 children from Indian/Pakistani/Black African/ Black Caribbean/White European and mixed heritage family backgrounds and 27 with White UK heritage. Children, their families and some of their teachers were interviewed. The interviews were coded to explore why certain children succeeded academically while others did not taking
into account the people, events and circumstances the children, parents and teachers identified as having had a positive or negative influence on the academic achievement over the years.

**Aims**

**The research questions**

The aim of the trajectories analyses is to extend our understanding of how child, family, pre-school and school factors and experiences interact and contribute to the achievement of children. Most specifically to:

- when and why do some ‘at-risk’ children ‘succeed against the odds’ while others fall further behind?
- what factors (family, home, pre-school etc.) act as ‘protective’ influences in combating poor outcomes and what factors increase the ‘risk’ of poor outcomes?
- what are ‘positive’ or ‘negative’ influences for certain groups of children?

**Part 1 An investigation of children’s learning trajectories from 3 to 11 years of age in literacy and numeracy**

The finding presented for ‘Part 1: The Quantitative analyses’ is a preliminary analyses and currently not in the public domain. We are grateful to the DfE for permission to report on some exploratory analyses and findings. For further information see Melhuish (forthcoming).

In this exploratory quantitative analyses trajectories were based upon children’s performance in relation to expectation predicted from a range of child, family and neighbourhood characteristics. A model involving 6 trajectory groups was achieved with provided a good fit with the data for both literacy and numeracy. These trajectories of achievement were characterised as follows:

1. **Initially very low and declining**
   This group starts substantially below expectation on the basis of child, family and neighbourhood characteristics and declines further up to age 11.

2. **Initially low but improving**
   This group starts below expectation but then proceeds to improve.

3. **Initially low or as expected but declining**
   This group either starts as expected or below expectation but then declines.

4. **Initially as expected or above expectation and improving**
   This group starts near to expectation or somewhat above expectation and subsequently improves relative to expectation.

5. **Initially above expectation but declining**
   This group starts higher than expected but then declines, often to the expected level, in subsequent years.

6. **Initially very high and remaining so.**
   This group starts way above expectation and continues in similar manner through to age 11.

**Key findings**

The initial pattern of a trajectory seemed to be established before Key Stage 1 (age 7 years) and the initial changes in children’s trajectories appeared to be influenced by both the Early Years Home Learning Environment and pre-school effectiveness.

The most important environmental factors associated with more favourable trajectories, (i.e., trajectories 2, 4 and 6), were better scores on:

- The Early Years Home Learning Environment (HLE)
- Pre-school effectiveness; and
- Primary school effectiveness (with effectiveness being a measure of how successful the institution is in affecting a child’s progress).
**Literacy and numeracy**
- For both literacy and numeracy trajectories the Early Years HLE and pre-school effectiveness were consistently predictive, with higher scores predicting membership of more favourable trajectories.
- For trajectories in numeracy better primary school effectiveness was also predictive of being in an improving/high trajectory. Thereafter it seemed that maintaining children in improving/high trajectories for numeracy at least was influenced by a higher primary school effectiveness.

**Self-regulation**
- The non-cognitive skill of self-regulation (e.g., thinks things out before acting, not easily distracted, perseveres) appeared to be an important mediating factor for much of the effect of the Early Years HLE and pre-school effectiveness.
- Better self-regulation measured at the start of primary school was highly predictive of more favourable children’s trajectories in literacy and numeracy. The ability to control and focus thought to control behaviour appropriate to specific situations is therefore advantageous for academic achievement.
- Earlier EPPSE findings indicated that self-regulation was enhanced by a more favourable Early Years HLE and by better pre-school effectiveness.

**Part 2 Performing against the odds: Case studies of the developmental trajectories of 50 EPPSE children**
This part of the EPPSE research uses qualitative case studies to explore why and when certain children ‘succeed against the odds’ while others fall further behind, and also when and why some ‘privileged’ children fall behind despite their positive circumstances.

**Key findings**
- stimulated in homes where parenting is a process of ‘active cultivation’ that facilitates and nurtures children’s cognitive and social skills allowing children to benefit from what the educational system has to offer;
- evident early in children’s learning life-course but often becomes more apparent over time;
- nurtured through good or excellent quality pre-school settings, particularly for boys from families with low socio-economic status who, the EPPSE study has found, are more likely to experience a poor early years home learning environment;
- stimulated by teaching strategies that allow students to bond with teachers and to enjoy lessons, resulting in students feeling encouraged to work to achieve beyond their predicted attainment;
- stimulated when schools help children to deal effectively with difficulties through additional classes. These classes allow children to catch up with their peers and help them (re)develop a positive perception of school and learning and of their ability to deal with difficulties;
- stimulated through emotionally and practically supportive relationships with parents, peers/friends and significant other adults as these experiences nurture children’s self-perceptions, sense of self-efficacy and effective learning strategies, which helps them to become ‘active agents’ in their learning life-course;
- stimulated by peers who offer positive role models and (sometimes) friendly competition;
- supported by social networks in the wider community through the social and cultural capital these networks provide to parents and children, and
requires effort, determination and active agency from the children themselves as well as from the people around them.

What distinguished trajectory groups?:
1 Low SES families fostering academic achievement
Parents with children who ‘succeeding against the odds’ practiced ‘active cultivation’. They engaged their young children in learning processes by reading with them, providing them with educational games etc., talking to them and other joint activities e.g. cooking together. They continued this involvement throughout the child’s learning life-course. Even in adverse circumstances these parents found ways to support their children’s learning and provided a highly favourable HLE. They valued these activities as opportunities to prepare their child for school and to foster a positive attitude to school. They were prepared to go to great lengths to provide these experiences and demonstrated determination and creativity in doing so. As children got older these parents continued to provide learning experiences as well as emotional and practical support with learning. If they felt they were unable help they found alternative ways, often by calling on their social networks and their limited cultural capital available. Through support and guidance they fostered meaningful and strong emotional relationships with their children.

2 Characteristics of parents engaging in active cultivation
The parents of low SES children ‘succeeding against the odds’ set and reinforced high standards for behaviour and academic aspirations for the child showing a high esteem for education. The limits to their social, cultural and economic resources, this did not stop them from helping their children to succeed in school. They used their own experiences as positive or negative examples for the children providing positive role models. Despite some limitations to their cultural and economic capital these parents had a strong sense of self-efficacy. Their positive attitude towards school and learning was continuously present as children progressed from pre-school to primary school and on to secondary school.

3 Parenting in homes of low achievers
For children from low SES homes who did not ‘succeed against the odds’, the HLE and parental attitude were often less obviously aimed at the development of educational skills. For ‘vulnerable’ boys in particular, the aspect of enjoyment seemed to be missing from many HLE experiences. Continuity of emotional and practical support for learning and education was uncommon. Often these parents expressed and displayed helplessness in their parenting. Many of them felt they were unable to provide support with school and learning or even to encourage their children to do well in school. This often left the children to sort out difficulties they encountered with school and learning.

4 Early distinctions in the development of academic life-course trajectories
Despite similarities in background, the children who ‘succeeded against the odds’ started their academic trajectories with higher early literacy skills than their low SES peers. In contrast ‘vulnerable’ high SES children started with lower early numeracy rankings than their more successful high SES peers. During pre-school, the trajectories of ‘academically successful’ low SES children showed substantial improvement. They were able to gain greater benefits from the learning experiences offered. The slower pace of development found for the academically less successful children (Gps 2 and 3) indicated a poorer fit between these children’s needs and the ability of schools, teachers and parents to tailor interactions to meet their needs. Interestingly, these same children quite regularly showed substantial improvement during the early years of secondary school. This improvement was attributed to maturation but also to the reinforcement of the curriculum and concepts addressed at the end of primary school through repetition during Year 7. Repetition of the curriculum provided children who previously struggled with a chance to fill in gaps in their skills and knowledge in both English and maths.
5 Supporting children to become active agents of academic success
There were distinctive combinations of cognitive and social/behavioural characteristics in children that facilitated or constrained their adaptation to school and learning. Children who were seen as clever, with a positive attitude towards homework and an internal locus of control had a more positive image which was continually reinforced by people at home and in school. This helped them to establish and strengthen a positive self-image. They developed a strong sense of self-efficacy with regard to learning which encouraged them to stretch their learning beyond ‘expected’. These children became ‘active agents’ of their academic success. In contrast, children who experienced learning difficulties or were not seen as clever developed a negative self-image which reinforced ineffective problem-solving strategies, diminished motivation for learning, and a sense of helplessness. This negative perception of children’s ability was reinforced by parents suggesting to children that ‘ability to learn’ was ‘a given’ rather than something to be ‘shaped’. This resulted in parents and schools making little effort to remedy the difficulties these children experienced.

6 Gender specific parenting and differences related to ethnic cultural heritage
More girls than boys experienced a medium or high early years HLE. There were no differences in parenting in the early years related to ethnic heritage during adolescence parents with girls, and parents with African or Caribbean heritage, felt that children’s ‘self-regulation’ abilities were related to their practices of teaching children practical life skills, and therefore they emphasised these practices as part of their child rearing strategies.

7 Foundations for academic success in the Early Years
Most parents, regardless of their SES, sent their child to pre-school because they believed that it offered opportunities to learn and socialize; skills they believed would help the child later on. In addition, parents with more academically successful children believed that pre-school would provide an opportunity for their children to become accustomed to school routines and rules, and develop literacy and numeracy skills, and would reinforce a positive attitude to school and learning. Parents of children ‘succeeding against the odds’ believed that pre-schools would offer their child something in addition to what they were able to offer at home. They evaluated the suitability of the setting for their child. The effect of going to a high versus low quality pre-school is particularly important for low SES boys, although these boys were more likely to attend low quality pre-school than boys with high SES families or girls from equally disadvantaged backgrounds. When boys from disadvantaged families attended an excellent pre-school they experienced longer-term benefits as all these boys went on to ‘succeed against the odds’. Few children from low SES families had the combined benefit of high HLE and excellent pre-school education. However, the relatively frequent occurrence of medium or high early years HLE with good pre-school experiences among the children ‘succeeding against the odds’, underlines the significance of this combination of experiences early on in children’s learning life-course.

8 Teaching that promotes academic success
Students and parents from low SES families ‘succeeding against the odds’ as well as those from ‘successful’ high SES families, attributed part of their success to the quality of their teachers. They thought that good teachers were able to explain topics and lessons clearly, were enthusiastic about the subject, were approachable and friendly when things were difficult to understand, had control over the class and clearly communicated their expectations and boundaries. Students bonded with these teachers they enjoyed their lessons and felt encouraged to work beyond their predicted attainment. The ‘vulnerable’ children in particular mentioned that a high number of supply teachers and the disorganised lessons that came with this contributed significantly to their low attainment.

9 Schools’ contribution to raising achievement
The one school-level factor that seemed to differentiate children who ‘succeeded against the odds’ from less successful children was their perception of the help they received from school when they were experiencing difficulties. They felt schools helped them to deal with difficulties through booster, remedial, homework, revision or behaviour classes. This helped children to
catch up, (re)establish and reinforce a positive perception of school and learning and improved self-efficacy. In contrast, ‘vulnerable’ children and their parents felt let down by schools and teachers. These parents (particularly from high SES families) often organised additional help for their child after school and many felt angry with school/headteachers for not dealing effectively with their children. Some of these negative perceptions were transmitted to children and might have reinforced a negative attitude to school and learning.

10 Empowering relationships with peers and friends
For the ‘academically successful’ children, peers/friends offered practical and emotional support with school and learning that benefited their attainment. The emotional support helped them to deal with any difficulties and practical support was often reciprocal. Children helped each other out during lessons and with homework. Children took peer tutor roles that also helped them to deepen their learning by rephrasing the teacher’s explanations for their friends or by receiving alternative explanations from their friends. These experiences contributed to children’s positive self-perception, self-efficacy, and use of effective learning strategies. Although some of the ‘vulnerable’ children also experienced positive peer influences, these students more often had friends and peers with negative attitudes to school and learning.

11 Additional gateways to social and cultural capital
The low SES children who ‘succeeded against the odds’ and the ‘successful’ high SES children made good use of resources that helped with school work (such as computers) including peers, siblings and other adults. Their positive attitude towards books and computers and frequent use of these tools for school or as hobbies will facilitate positive learning throughout their life-course. Families with academically successful children valued extra-curricular activities as experiences that contributed to their children’s development and school achievement. Low SES parents with children who did not ‘succeed against the odds’ usually regarded these activities as fun and relaxing, but did not consider any educational benefits. As a result, ‘vulnerable’ children were less likely to be encouraged to persevere with extra-curricular activities. Support networks of extended family, friends and religious communities played an important role in supporting parents as they offered additional social and cultural capital. This often went beyond practical help and offered parents chances to develop their parenting knowledge and skills and reinforced their sense of self-efficacy with regard to the child’s academic success. This particular type of support was mentioned more often by the low SES families with children ‘succeeding against the odds’ and by high SES families in general.
The EPPSE website: http://eppe.ioe.ac.uk contains information on the sample, methodology, and many other aspects of the project. The website also contains links to the information listed below (see the ‘Publications’ sections of each phase of the study). For further information contact Brenda Taggart, Principal Investigator/Research Co-ordinator, 0207 612 6219, b.taggart@ioe.ac.uk

The Pre-school phase:

End of pre-school phase report and research brief

There are twelve technical papers associated with this phase of the research - see http://eppe.ioe.ac.uk

An Introduction to the Effective Provision of Pre-School Education (EPPE) Project.

Technical Paper 2 (1999)
Characteristics of the Effective Provision of Pre-School (EPPE Project sample at entry to the study.

Contextualising EPPE: Interviews with local authority co-ordinators and manager.

Parent, family and child characteristics in relation to type of pre-school and socio-economic differences.

Characteristics of the centres in the EPPE sample: Interviews.

Technical Paper 6 (1999)
Characteristics of the centres in the EPPE sample: Observation profiles.

Characteristics of pre-school environments.

Technical Paper 7 (2001)
Social/Behavioural and cognitive development at 3-4 years in relation to family background.

Technical Paper 8a (2002)
Measuring the impact of pre-school on children's cognitive progress over the pre-school period.

Measuring the impact of pre-school on children's social/behavioural development over the pre-school period.

Report on age 6 assessments.

Intensive case studies of practice across the Foundation Stage.

Report on the continuing effects of pre-school education at age 7

The final report

Pre-school pedagogy
The Primary Phase:

End of primary school phase report and research brief
Final report from the primary phase: Pre-school, school and family influences on children’s development during Key Stage 2 (2008). Research Report RR061

Final Report from the Primary Phase: Pre-school, School, and Family Influences on Children’s development during Key Stage 2 (Age 7-11 (2008). Research Brief RB061

Cognitive outcomes:
Year 5


Year 6

Influences on children’s cognitive and social development in Year 6 (2008). Research Brief RB048-049

Social/Behavioural outcomes:
Year 5
Influences on children’s development and progress in Key Stage 2 (2007) Social/behavioural outcomes in Year 5. Research Report RR007

Influences on children’s development and progress in Key Stage 2 Social/behavioural outcomes in Year 5 (2007). Research Brief RB007

Year 6

Influences on children's cognitive and social development in Year 6 (2008). Research Brief RB048-049
Affective attributes and outcomes
Year 5 only
Relationships between pupils’ self-perceptions, views of primary school and their development in Year 5 (2008)


http://eppe.ioe.ac.uk/eppe3-11/eppe3-11%20pdfs/eppepapers/Influences16Sept08.pdf

Exploring pupils’ views of primary school in Year 5 (2008)
http://eppe.ioe.ac.uk/eppe3-11/eppe3-11%20pdfs/eppepapers/PupilsViewsYr5.pdf

Study of Year 5 classrooms/schools

Research Report RR817


The Influence of School and Teaching Quality on Children’s Progress in Primary School. (2008)
Research Report RR028

The Influence of School and Teaching Quality on Children’s Progress in Primary School. (2008)
Research Brief RB028

Effective Primary Pedagogical Strategies in English and Mathematics in Key Stage 2: A study of Year 5 classroom practice drawn from the EPPSE 3-16 longitudinal study
Research Report:
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR129

Research Brief
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RB129
EPPSE as a programme of research

Effective pre-school provision in Northern Ireland (EPPNI Study)

Effectiveness of primary schools in England (Reading and Maths)
http://eppe.ioe.ac.uk/eppe3-11/eppe3-11%20pdfs/eppepapers/Tier%201%20Full%20Report%20-%20Final.pdf

Research Brief RBX06-06
http://www.education.gov.uk/publications/eOrderingDownload/RBX06-06.pdf

English and Maths
Not available electronically:


Equality
http://www.theequalitiesreview.org.uk/upload/assets/www.theequalitiesreview.org.uk/equality_review.pdf

Promoting Equality in the Early Years: Report to The Equalities Review
http://www.equalitiesreview.org.uk

Impact on policy and practice
not available electronically


**Mixed methods research**
not available electronically


**Tracking and Mobility**

**Pedagogy**

Effective Primary Pedagogical Strategies in English and Mathematics in Key Stage 2: A study of Year 5 classroom practice drawn from the EPPSE 3-16 longitudinal study Research Report: [https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR129](https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR129)

Research Brief [https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RB129](https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RB129)

**Quality in pre-school**
Not available electronically:


**Risk and Resilience**
Not available electronically:


Risk and Resilience -
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR128
Research Brief:
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RB128


Trajectories across the life course (success against the odds)
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR128
Research Brief:
https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RB128


Transitions from primary to secondary school

What makes a successful transition from primary to secondary school? (2008) Research Brief RB019

Special educational needs
EARLY TRANSITIONS AND SPECIAL EDUCATIONAL NEEDS STUDY
THIS SUB-STUDY PRODUCED 3 TECHNICAL REPORTS SEE http://eppe.ioe.ac.uk
Special needs across the pre-School period
Special educational needs in the early primary years: Primary school entry to the end of Year 1
Special educational needs: The parents’ perspective


Not available electronically:
EPPE BOOKS AND BOOK CHAPTERS (NOT AVAILABLE ELECTRONICALLY)

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SELECTED JOURNAL ARTICLES

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