# Research for Teachers

## Effective provision of pre-school education

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**What makes a difference in the early years of children's schooling?**
Early years education has become a key feature of national policy in the UK as government, local education authorities and schools try to find ways of making a difference to the lives of young children and their families.

Research (such as Feinstein, 2003 - see Further Reading) has shown that children from low socio-economic status (SES) backgrounds are particularly at risk of under-achievement or even failure at school; research in the USA and Canada has also shown that that targeted intervention at an early stage can make a lasting difference for the better. The Effective Provision of Pre-School Education (EPPE) Project team set out to make a contribution to evidence-based policy and practice in this area in a number of ways. This TLA research summary draws on two strands of the work in particular:

- the interim findings (from 14 case studies) which were reported in an earlier TLA research summary, *Researching effective pedagogy in the early years*; and
- the final overview report which is summarised here. This presents a very comprehensive picture of all the evidence about impact, illustrated through a series of case studies.

The report is:

Sylva, K., E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart. *The Effective Provision of Pre-School Education (EPPE) Project: Final Report.* A longitudinal study funded by the DfES, 1997-2004.

In this study, the researchers investigated the impact of pre-school provision in England on children's intellectual, social and behavioural development at age five and seven. (A TLA research summary of a subsequent report by the EPPE team, which examines the continuing effects of pre-school at key stage 2, will be available soon). The researchers collected a range of information on 2,800 children, who between them had attended 141 pre-school settings, and an additional 300 children with no pre-school experience, to investigate:

- the pre-school factors that had an impact on children's development

- which children particularly benefited from pre-school education
- the impact of the home on children's development
- whether the effects of pre-school continued through Key Stage 1.

The researchers found that pre-school provision had positive effects on children's development, that some pre-schools were more effective than others, that beneficial effects of pre-school lasted through key stage 1 and that an earlier start in pre-school was associated with better intellectual development. They found that activities which parents and carers undertook with their young children (such as reading to them, singing songs and nursery rhymes and playing with letters and numbers) made a difference to their children's development too. The researchers also highlighted specific features of pre-school practice (such as 'sustained shared thinking', where adults and children work together to explore problems and balancing adult-led and child-led learning activities) that were evident in the most effective settings.

The TLA research team presents this summary of the overview report of the work of the EPPE research because it identifies, explores and offers teachers the opportunity to reflect on teaching and learning in the context of the range of factors which are present in the lives of young children. Whilst the study is particularly relevant to school leaders and teachers of early years and early primary children, it also provides all teachers with insight into education in these formative years on which later education crucially depends. The study is unusual in providing a very wide range of types of evidence about learning amongst very young children based on longitudinal data.

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## Overview

**Why is the issue important?**

There is widespread interest in the kind of pre-school experiences that make a real difference to the lives of young children, particularly those with low socio-economic status backgrounds who are at risk of underachievement or even failure at school.

**What did the research show?**

The researchers found that:

- pre-school provision had positive effects on children's development
- the beneficial effects of pre-school lasted through Key Stage 1
- an earlier start in pre-school was associated with better intellectual development.

High quality pre-schooling particularly benefited disadvantaged children, suggesting that pre-school can be an effective intervention for reducing special educational needs (SEN).

**How was this achieved?**

Some pre-schools were more effective than others. Characteristics of effective settings included:

- warm, interactive relationships between adults and children
- adult support in talking through conflicts
- a balance of teacher-led and child-initiated approaches
- teachers and parents working together to improve children's learning
- 'sustained shared thinking', where adults and children work together to explore problems.

Activities which parents and carers undertook with their young children at home (such as reading to them,

singing songs and nursery rhymes and playing with letters and numbers) made a difference to their children's development too.

**How was the research designed to be trustworthy?**
The researchers followed 2,800 three-year old children who attended 141 pre-school settings between them and 300 children who had no pre-school experience, until they were seven years old. They collected information about the children's attainment and development at different points in time, information about their personal, social and family characteristics and information about the pre-school settings they attended. The researchers used a statistical model they had designed that enabled them to take account of child, parent and home factors and ran multi level analyses to establish the contribution of the various factors in the pre-school settings. They explored the characteristics of effective practice in detail through fourteen case studies of pre-school and early years settings where children had positive outcomes.

**What are the implications?**
The study showed the importance of:

- pre-school centres promoting children's intellectual, social and behavioural development, through creating opportunities for engaging children in shared sustained thinking, working towards an equal balance of child and adult initiated activity, and developing behaviour policies in which staff support children's behaviour management through reasoning and talk
- giving parents and carers guidance on activities that they could do at home to aid their children's development, such as reading books, singing songs and nursery rhymes, painting and drawing, playing with letters and numbers, and taking children on visits
- sharing with parents, through workshops etc, the evidence about the importance of learning activities at home
- developing initiatives, such as community projects designed to compensate children who have had limited home learning experiences.

**What do the case studies illustrate?**
The case studies show ways of:

- developing children's early language and learning skills
- promoting appropriate behaviour
- the effects of pretend play on young children's development
- giving parents guidance about educational activities they can do at home with their children.

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## Study

**What did the researchers find out about the pre-school period?**
The study found that attending pre-school, compared to not doing so, enhanced children's all-round development. Specifically, they found:

- the length of time children attended pre-school was important - an earlier start (between the ages of two and three years) was related to better intellectual development, but full attendance led to no greater gains for children than part-time
- disadvantaged children benefited significantly from good quality pre-school experiences, especially when they were in groups composed of children from a range of social backgrounds
- quality was highest in settings which integrated care and education, and in nursery schools
- the kind of activities the parents did with their children at home was more important than the occupation, standard of education or level of income they had.

In addition, the researchers identified a number of factors related to high quality pre-schooling including:

- staff having higher level of qualifications
- warm interactive relationships between adults and children
- adult support in talking through conflicts
- a balance of teacher-led and child-initiated approaches
- teachers and parents working together to improve children's learning.

We explore these findings in more detail on the following pages.

**Which pre-school factors had an impact on children's development?**
The researchers found that the development of all the children who attended pre-school improved compared to children who had no pre-school education. Evidence from the study suggested that children with no pre-school experience had poorer cognitive attainment, sociability and concentration when they started primary school even when controlling for background factors. The research identified a range of factors related to pre-school that made a difference in children's development. These included:

- type of pre-school provision
- age of entry and duration of pre-school experience
- qualifications of staff
- balance between curriculum and children's needs and interests.

**Type of pre-school**
Integrated centres that combined education with care and nursery schools tended to achieve better intellectual outcomes and social development for children. (The integrated centres in the EPPE sample were all registered as nursery schools, but had extended their provision to include flexible hours for childcare along with substantial health and family support services).

**Age of entry and duration of pre-school**
How long a child attended a pre-school (measured in months) was related to their intellectual gains at school entry and again at the end of Key Stage 1. An early start at pre-school (between ages two and three) was linked with better intellectual attainment and being more sociable with other children. The benefits of an early start continued to be evident at the end of Key Stage 1. The researchers found no evidence that attending a pre-school for a full-day led to faster development than attending for half a day.

**Staff qualifications**
Children made more progress in pre-school centres where staff had a higher level of qualifications, particularly if the manager was highly qualified. Having trained and qualified teachers working with children in pre-school settings for a substantial proportion of time had the greatest impact on quality and was linked with improvements in pre-reading and social development at age five. Similar positive effects were reported when the curriculum leader was a trained teacher.

**Balance in the curriculum**
Children from centres that taught a balanced curriculum, developing both academic and social behavioural development equally, showed the greatest learning gains. An emphasis on a balanced curriculum seemed to be particularly effective in centres where there were children with different cultural backgrounds, abilities and interests. The researchers also found that settings that were strong on the intellectual aspects of the curriculum tended to be strong on the social and behavioural side as well. Practitioners may like to read a case study of how a nursery school developed and implemented an action plan for developing children's early literacy skills.

**Which children particularly benefited from effective pre-school education?**

The researchers explored whether attending pre-school had an impact on the progress of different kinds of children and found it particularly benefited disadvantaged children. Their study showed that one in three children were 'at risk' of developing learning difficulties at the start of pre-school, but this fell to one in five by the time they started school. They suggested that pre-school can be an effective intervention for reducing special educational needs (SEN), especially for the most disadvantaged and vulnerable children.

The evidence also suggested that high quality pre-schooling improved the behaviour of disadvantaged children, who thereby became less 'at risk' of engaging in anti-social behaviour. Practitioners may find it helpful to read a case study that showed how using informal listening strategies and non-confrontational language helped mediate the behaviour of children (see case study 2) with emotional and behavioural difficulties (EBD). Practitioners may also like to look at the ways of managing the behaviour of children with EBD which we reported in another Research for Teachers summary.

The researchers' results suggested that specialised support in pre-school, especially for language and pre-reading skills, can benefit children from disadvantaged backgrounds and those for whom English is an additional language. Practitioners may like to read a case study of a formal programme designed to help disadvantaged children progress by improving their listening skills (see case study 3).

Whilst not eliminating disadvantage, pre-school experience helped to ameliorate the effects of social disadvantage. The researchers suggested therefore that investing in good quality pre-school provision is an effective means of achieving national and/or local policy targets concerning social exclusion and breaking cycles of disadvantage.

**Which specific pre-school practices helped children develop?**
When analysing effective pre-school practices, the EPPE researchers drew on the case study data collected for the associated 'Researching Effective Pedagogy in the Early Years' (REPEY) study, which we reported in another Research for Teachers summary. We have summarised these practices on this page:

- cognitive interactions
- questioning techniques designed to stimulate young children's thinking
- a balance of activities initiated by teachers and children
- adult support in talking through conflicts
- teachers and parents working together to improve children's learning.

Practitioners can find out more about these practices, including illustrative examples, in our earlier RfT about the project.

**Adult-child verbal interactions**
More 'sustained shared thinking' was observed in settings where children made the most progress. Sustained shared thinking occurs when two or more individuals work together to solve a problem, clarify a concept, evaluate an activity, extend a narrative etc. Both parties must contribute to the thinking and it must develop and extend the understanding. It was more likely to occur when children were interacting 1:1 with an adult or with a single peer partner during focused group work. Staff in the settings where the children made the most progress also engaged in open-ended questioning and provided formative feedback to children during activities. Practitioners may like to read a case study which identified aspects of adults' talk that helped to develop young children's language and learning skills. (see Case study 4)

**Initiation of activities**
The researchers found that in the most effective settings, activities were initiated equally by staff and children. They also reported that the opportunities for extending children's thinking - in some cases leading to 'sustained shared thinking' - were significantly increased when staff prolonged the interactions the children had initiated. Freely chosen play activities often provided the best opportunities for adults to extend children's thinking. The researchers suggested that extending child-initiated play, coupled with the provision of teacher-initiated group work, may be the most effective vehicles for learning.

Practitioners may like to read a case study that investigated the effects of teacher-initiated and child-initiated pretend play activities on young children's emotional and cognitive development. Practitioners may also find it helpful to read why the developmental psychologist Vygotsky believed play was important in pre-school children's cognitive development. We summarised his views about play in our RfT 'Social interaction as a means of constructing learning'

**Behaviour policies**
The most effective settings adopted behaviour policies in which staff supported children in rationalising and talking through their conflicts. In settings that were less effective in this respect there was often no follow-up on children's misbehaviour and, on many occasions, children were either distracted or simply told to stop.

**High levels of parent engagement in their children's learning**

The most effective settings shared child-related information between parents and staff, shared their educational aims with parents and parents were often involved in decision making about their child's learning programme. These practices helped parents to support their children at home with activities or materials that complemented their experiences of the Foundation Stage.

**What impact did the home have on children's development?**
The researchers found the activities parents and carers undertook with their young children made a real difference to their children's development. A range of activities had a positive effect on their development. For example:

- reading with their child
- teaching songs and nursery rhymes
- painting and drawing
- playing with letters and numbers
- taking children on visits
- creating regular opportunities for them to play with their friends at home
- were all associated with higher intellectual, social and behavioural scores.

Evidence from the study suggested that, by engaging in home learning activities with their children, parents helped to reduce the risk of SEN for their children. Practitioners may like to read a case study of a programme that was designed to give parents guidance in home learning activities.

The positive effects of the home environment were only moderately associated with parents' educational or occupational level - the kind of activities parents did with their children at home was more important. Practitioners may like to read a case study that shows how a nursery encouraged parents to take part in educational activities with their young children.

The researchers' findings indicated that whilst there was, on average, a strong relationship between family background characteristics and the child's social and cognitive development at entry to pre-school, this relationship is, on average, reduced (although it is still strong) by the time a child enters primary school.

**Did the beneficial effects of pre-school last throughout Key Stage 1?**
Overall, the researchers found that the positive effects of pre-school were still evident at the end of Key Stage 1, although they were less marked than when the children started at school.

**Quality of pre-school and duration of attendance**
Pre-school quality was linked positively with children's scores on standard tests of reading and mathematics at age six. At age seven, the relationship was weaker, but still evident, whilst the effect of quality on social and behavioural development was no longer significant. The more effective pre-school centres had longer lasting effects on children's development.

The number of months of pre-schooling continued to have an effect on the children's progress, although this effect was stronger for their academic skills than for their social behavioural development. High quality pre-school provision combined with longer duration had the strongest effect on development.

**Vulnerable children**
A small number of children continued to have signs of special educational needs after entering primary school - this group contained more of the children who had not attended pre-school. The impact of English as an additional language (EAL) was much reduced by age seven, compared to earlier ages, for those children who attended pre-school.

**Home learning environment**
Positive home learning environments during the pre-school period also continued to have a beneficial impact at the end of Key Stage 1.

**How was the EPPE study designed?**
The Effective provision of Pre-school Education (EPPE) Project was a longitudinal study of a randomly stratified sample of around 3,000 three year olds in England who were followed until they were seven years old. The researchers used a 'value added' or 'school effectiveness' approach to investigate the short and medium term impact of pre-school provision.

The EPPE research team collected three main sets of data: children's attainment and development at different points in time, information about their personal, social and family characteristics and information about pre-school settings. The data sources included:

- standardised child assessments at pre-school, at entry to school and at the end of Years 1 and 2
- child social and behavioural profiles completed by pre-school and primary staff
- parental interviews
- interviews with pre-school and primary staff
- quality rating scales for pre-school centres
- case study observations and interviews.

A sample of 300 'home-based' children (who had no or minimal pre-school experience) were recruited to the study at entry to primary school for comparison with the pre-school group.

The 141 pre-school settings studied were drawn from a range of providers in six local education authorities (local authority day nurseries, integrated centres that combined education and care, playgroups, private day nurseries, nursery school and nursery classes and covered urban, suburban and rural areas). The team explored the characteristics of effective practice through fourteen case studies of pre-school and early years settings where children had positive outcomes. The case studies included detailed records of observations of staff teaching and children's learning. Information was also gathered and analysed using interviews with parents, staff and managers.

The analytical strategy the researchers adopted allowed them to link their three data sets. For example, they designed a statistical model that enabled them to take account of child, parent and home factors and ran multi level analyses to establish the contribution of the various factors in the pre-school settings.

**What are the implications of this study?**
Early years practitioners may wish to consider the following implications of the findings of this study:

- could your pre-school centre do more to promote the factors and features identified by this study, and illustrated by the case studies, (see Case study section) as having links with children's intellectual, social and behavioural development, such as: creating opportunities for engaging children in shared sustained thinking, working towards an equal balance of child and adult initiated activity, or developing behaviour policies in which staff support children's behaviour management through reasoning and talk

- working towards integrating care provision and education
- would staff at your pre-school centre like to share ideas on how to provide children with the quality learning experiences identified by this study, perhaps using some of the web resources (click to further reading) and/or the case studies (see Case studies) as a basis for discussion as part of their professional development?
- could your pre-school centre give parents and carers more guidance on activities that they could do at home to aid their children's development, such as reading books, singing songs and nursery rhymes, painting and drawing, playing with letters and numbers, and taking children on visits, perhaps using a similar approach to that described in Case study 6?
- could you share with parents, through workshops or other means, the evidence about the importance of learning activities at home?

School leaders may like to consider the following implications:

- could you encourage and support early years teachers and pre-school leaders to share ideas on how to involve parents in their children's development and learning?
- could your school develop initiatives, such as community projects (see online further reading) (click to further reading) designed to compensate children who have had limited home learning experiences?

**What will the focus of the next phase of the EPPE project be?**
The next phase of the project (2003-2008) will investigate the impact of pre-school education at Key Stage 2. The team will also investigate the way in which educational experiences in Key Stage 2 interact with the earlier pre-school experiences in the shaping of cognitive, social and behavioural outcomes for children at the transition to secondary school. Specifically, the researchers aim to find out:

- whether the effects of pre-school continue through to KS2
- what the characteristics of 'effective' primary classrooms and schools are
- who the 'resilient' and 'vulnerable' children in the EPPE sample are
- what the contribution of 'out-of-school learning' (homes, communities, internet) is to children's development.

The researchers have planned three tiers of research to explore these themes.

**Tier 1: The primary school effectiveness study**
The researchers aim to compare the effectiveness (and trends in effectiveness) across KS2 of all primary schools in England. The study will provide effectiveness measures for schools in the EPPE sample so that the schools the EPPE children attend can be placed in the context of other schools in England.

**Tier 2: The continuing effects of pre-school education**
This study aims to find out whether the effects of pre-school that were apparent at entry to school continue through to KS2 for 2000+ children in 700+ schools after controlling for children's performance at age five and for social background. The study intends to identify children who have 'succeeded beyond the odds' and also children whose early profiles were sound, but who later underachieved despite having average or good early profiles, and investigate the contributing factors in each case. The study will also continue to monitor the progress and development of children 'at risk' of developing SEN.

**Tier 3: Investigating educational processes**
The researchers intend to focus in more detail on around 1,600 of the EPPE children and their classmates who attend 125 schools, to investigate the contribution to children's outcomes of classroom and school processes related to children's attainment and social development.

**Your Feedback**
Have you found this study to be useful? Have you used any aspect of this research in your own classroom teaching practice? We would like to hear your feedback on this study. To share your views with us please email: research@gtce.org.uk
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# Case studies

We have selected seven case studies to illustrate different aspects of early years' practice. The case studies are mostly practitioner based and were undertaken independently of the main study.

**Your Feedback**
Have you found this study to be useful? Have you used any aspect of this research in your own classroom teaching practice? We would like to hear your feedback on this study. Email us at: research@gtce.org.uk

## Developing chldren's early literacy skills

We chose this case study because it shows how staff in an LEA nursery school developed and implemented an action plan for developing children's early literacy skills. At the time of the project, 146 three and four year old children attended the nursery for either five mornings or afternoons a week. In each session, the children were divided into three groups of around 26 children. Each group had its own suite of rooms.

The nursery aimed to provide a warm, secure learning environment. The staff constructed the curriculum to address the children's social, emotional, intellectual, physical and spiritual development. Whilst appreciating the value of the experiences the nursery offered, some parents thought that their children might be at a disadvantage when they transferred to infant school, where acquiring the ability to read and write was seen as paramount.

The nursery planned to:

- raise the awareness of early literacy in staff
- give early literacy a higher profile in classroom activities
- help parents understand the relationship between nursery activities and learning to read and write.

The strategies used included:

- reviewing the range and methods of storytelling used
- using naturally occurring opportunities to talk to parents about the way early literacy develops
- reviewing provision for the development of early literacy skills in writing areas, role-play contexts and during painting, modelling and construction activities.

In their weekly team meetings, the nursery staff discussed ways of improving the children's access to books and ways of varying storytelling. They also discussed ways to observe and document literacy skills when the children were involved in activities such as drawing, painting and construction. A chart was put up in the staffroom so that each group could contribute ideas for activities and highlight the early literacy skills that could be developed from these activities.

Following their discussions, the staff reorganised the classrooms, arranged special activities and ensured they were ready to respond to aspects of early literacy which occurred during the normal range of classroom activities. Role-play areas were set up so that the children could use writing in role-play settings. For example, one group had an office, one had a shop with till receipts and all groups added magazines and telephone pads to their home corners. Writing areas were relocated in some groups and a wider range of writing equipment and paper was made available in all groups.

Staff used post-its to record observations of the children during these sessions. Observations were coded according to curriculum area and noted in a file for that child alongside specific action and general planning

implications.

After the children had particularly enjoyed listening to a story the group made friezes or took part in role-play activities based on the story. Class books were made about favourite stories and also visits, for example to a nature centre. This generated great enthusiasm for book making amongst the children and book-making activities were then arranged in all groups. The children became involved in the mechanics and structure of books. They made books with flaps which lifted up to reveal surprises, zig-zag and split books. Some children added speech bubbles with 'writing' inside. The children gained confidence that they too could be storytellers, authors and publishers.

The children's enthusiasm for book making was carried over into their activities at home - the children were proud of the books they had made at nursery when they took them home and they made more books with their parents. This in turn helped the nursery staff to promote discussions about early literacy with parents. By becoming involved in helping their children with early literacy skills, parents developed an understanding of how these skills were laying the foundations for reading and writing.

**Reference:**
Pascal, C. & Bertram, T. (1999, 2000) *Effective Early Learning: case studies in improvement*. London: Hodder & Stoughton

## Promoting appropriate behaviour

We chose this case study because it shows how early years staff in one school mediated children's poor behaviour. They used a combination of active listening and non-confrontational language.

This project took place in the early years department of a primary school for children with Emotional and Behavioural Difficulties (EBD). The children were aged between four and eight years old and had Statements of Special Educational Need that identified EBD as their primary difficulty. Fourteen hours of video observation of adults and children working together were recorded. The study focused on incidental classroom language - the language samples observed were integral to the everyday working of the classroom. They were not part of a specific active listening intervention programme. Listening actively for learning opportunities was found to be helpful in stimulating appropriate behaviour.

Listening made most difference when it was used throughout the day in contexts which were important to the children. Staff aimed to promote appropriate behaviour by challenging the children's listening skills. For example, at snack time, an adult's casual comment that she was looking for someone who was sitting quietly helped to calm a noisy and restless group of children.

The video material revealed how the active listening techniques often involved:

- one adult providing a commentary on an incident or activity happening in the classroom, which suggested appropriate behaviour
- conversations between two or more adults, which were intended to be overheard by children.

These techniques provided opportunities for the adults to repeat and clarify meaning without any emotional involvement so that the child could listen actively, process the message and respond appropriately. At the same time pupils had several opportunities to decode what they had heard.

When adults used active listening strategies to mediate the children's behaviour they used:

- a quiet voice and supportive intonation
- positively phrased language
- a slow pace with frequent repetitions

- language only slightly more sophisticated than that of the pupils.

Active listening promoted non-confrontational language. By making simple statements, the teacher, restricted the opportunity for pupils to enter into a discussion about unacceptable behaviour and confrontations were therefore prevented.

**An example of active listening in practice**
Donald (D) was slow to get dressed after PE, easily distracted and noisy. The Learning Support Assistant (LSA) was preparing work for children on the computer. A parent helper (P) was choosing children to decorate cakes for the Christmas Sale. The teacher (T) was writing with individual children.

LSA: oh...if Donald isn't ready I won't be able to ask him to help me.
D: I'm being quick ..... I'm being quick.
LSA: Jimmie, come and help me.
D: oooooh (continues fussing over dressing).
T: I'm just listening to quiet people in the book corner.
P: Donald hasn't had a go here yet.
T: Oh well, if Donald is quiet enough Ann, you could ask him to help you with the cakes.
P: I'll be listening then.

In the example, the criteria for Donald to join in the desired activity (working at the computer) was 'being ready'. Once it became clear that Donald had missed his first choice activity, the teacher stepped in with the merest suggestion that other alternatives were available. The parent extended this approach by 'reminding' the teacher that Donald had not helped with the cakes.

This gave the teacher a further chance to talk about Donald being quiet. The parent rounded off the episode by reaffirming the criteria for joining her group.

Overall, Donald had five opportunities to engage with the idea that the quicker he dressed, the greater the choice of activity that would be available to him. The pace of conversation in this example enabled the child to take control of his behaviour.

**Reference:**
Thorne, C. (1989) The potential of active listening for sustaining appropriate behaviour among children. A research project funded by the Teacher Training Agency as part of the Teacher Research Grant Scheme 1998/9.

## Teaching young children listening skills

We chose this case study because it is an example of how early years staff improved the listening skills of children who were easily distracted.

**The programme**
The programme was very structured. Activities to develop attention control were introduced in daily sessions of ten minutes. The lead adult (either the class teacher or a nursery nurse) began by stating the rules for effective listening - STOP, LOOK, LISTEN - whilst demonstrating the desired behaviour with gestures, e.g finger on lip, cupping ear with hand. The rules were restated as necessary during the session.

Activity 1 involved teaching the children to listen to, and discriminate between, sounds made by sets of four sound makers, e.g. bells, tambourines, clackers etc. These symbolic noises were introduced before spoken language so that the children could focus on sounds without having to understand speech.

The teacher demonstrated the sound made by one sound maker, then passed it round the group to encourage

the children to make the sound. She then used the matching instrument, from behind a screen, to make the sound together with each child in turn. The activity was developed in subsequent sessions by using the second and third instruments separately and so on. In session 5, all four sound makers were used in turn.

Activity 2 was designed to develop auditory memory. The teacher presented eight objects, e.g. cup, pencil, ball, etc. one at a time to the children whilst naming it. The objects were placed on the floor and, when all were in front of the children, each child in turn was asked to select a named object.

During week 2 the children had to select three named objects, and in week 3, three objects. In week 4, the objects were placed out of sight of the children so that, when the children were asked to select 2 named objects, they had to rely on their auditory memory alone (rather than visual and auditory) to remember which objects to select. During week 5 the children had to collect three objects and during week 6, four objects. It was important that children did not move on to the next part of the programme before they were secure on the current part. Careful record keeping, using prepared sheets, helped to monitor the progress of each child. The objects and sound makers were changed after six weeks to maintain the interest and enthusiasm of the children.

Speech and language therapists tested the children at the start of the programme and end of the programme. The test measured the children's ability to make inferences from pictures, and understand single words and that grammar changes meaning. It was expected that if the children had developed better attention control that this would be reflected in improved scores in comprehension. As 65% of children would score between 40-60, the baseline was taken to be 40.

At the start of the programme one third of the intervention group (11 children) and half of the control group (5 children) were on or below the baseline of 40 marks. After the programme, five children in the intervention group and two in the control group fell into this category. Eighty-four percent of children in the intervention group and 80% in the control group made some progress. However, nine children (28%) improved by 15 marks or more in the intervention group compared to 1 child (10%) in the control group who made similar progress.

Teachers reported that some children had started to apply the strategies learnt in the group sessions to other activities in the classroom. For example, one child was observed reminding his partners during another activity that they should, "stop, look and listen". The teachers felt that the project had been useful for their own professional development too. They noticed if children were attentive before they issued instructions and used the Stop, Look, Listen gestures to gain attention in other classroom situations. They also became alert to their own classroom language:

"I'm more conscious of what I say."
"I think more carefully about explanations and instructions."
"I cut down on my volume of information."

**Reference:**
Jeffries, K. & Newton, L. (1999) Learning to listen. A research project funded by the Teacher Training Agency as part of the Teacher Research Grant Scheme 1998/9.

## Developing young children's language and learning skills

We chose this study because it shows the kinds of teacher talk that enables children to develop their language skills and extend their thinking.

Audio recordings of teacher-pupil talk during a wide range of activities were collected from eight early years classrooms in five schools within one LEA.

The talk was analysed to highlight language and cognitive development.

Observation notes were also recorded at the time of the recordings, and the participating teachers and some pupils were interviewed.

The study found that some adults provided more opportunities for language development in early year pupils than others - their pupils displayed a wider range of language and learning skills in their talk. High-quality pupil cognitive and language development was associated with teachers taking steps to involve pupils in active conversations with teachers, by encouraging pupils to:

- initiate topics
- offer information
- speculate about possibilities.

Open-ended questions which encouraged speculation ('I wonder what happens if ...?') were better for provoking pupils' thinking than closed yes/no questions.

Open questions helped pupils to think aloud and to explore their ideas.

Pupils found it difficult if teachers used strategies that did not allow them to contribute to a topic or shape a discussion.

The pupils in the study naturally identified teachers as the controller of talk and the asker of questions. One reception pupil showed how she did not have a challenging expectation about her role in conversations in this comment:

'Well, we're going to the farm tomorrow and when we get back the teacher'll ask us: "what did you see there, how do you milk a cow" and stuff like that'.

Others clearly regarded the teacher's role as being restricted to 'telling us if we've got the answer right'. A reception pupil commented that 'they say "noooo" if it's wrong and "yes, good" if it's right'.

The researcher found a number of complementary strategies to questioning that were useful for encouraging pupils to extend their contributions to classroom talk, including:

- short silences allowed pupils the opportunity to give their own views, to ask questions and formulate their own ideas
- increased waiting time before asking the next question provided pupils with valuable thinking time to develop and extend their contributions
- invitations to pupils to elaborate on their contributions
- teachers making a personal contribution from their own experience by telling the class something, gave pupils the opportunity to make their own contribution, discuss the teacher's experience or ask the teacher a question
- teacher reflective statements encouraged pupils to explore the topic further
  offering pupils information on the topic encouraged pupils to offer their own information
- clarifying ideas encouraged pupils to give their own views and consider other view points.

**Reference:**
Hughes, M. (1998) Teachers and other adults as talk-partners for pupils in nursery and reception classes. Available from DfES publications, reference no: TPU0228

## The impact of teacher-directed and child-directed pretend play on young children's emotional and cognitive development

We chose this case study because it shows the importance of play-based curricula in pre-school programmes. The researchers looked at the effects of two forms of pretend play on pre-school children's emotional and cognitive development. The study involved 51 children aged three to six years attending one kindergarten in the Slovak Republic. The researchers observed 26 lessons, each lasting around 20-25 minutes. They also videotaped the activities of the children and their teachers.

The two ways of organising pretend play were:

- Teacher-directed play - when all the children in the class were simultaneously involved in a play activity directed by the teacher. For example, the teacher constructed a bus from chairs with the children. The teacher then directed the play by making one of the children the bus driver and the others passengers, and telling the children where the bus was going etc. By directing the play, the teacher modeled for the children how to behave when traveling on a bus.
- Child-directed play (also referred to by the researchers as group free play) - when, after an initial stimulus by the teacher, children played in small, flexible groups of mixed age and gender, formed spontaneously and adapted during the lesson. The teacher unobtrusively facilitated and managed the children's play by providing a stimulating environment in line with the goals of the lesson, and by encouraging the children to take part, cooperate with one another and solve problems together. For example, a group of children wanted to play "on a bus" again, and constructed a bus from chairs like the one they saw during the teacher-directed play "on a bus". The children decided for themselves who should be the driver and where they were travelling to etc. The children also developed and improvised changes to the play which had not been included in the teacher-directed play. For example, a boy decided he wanted to be a policeman and stopped the bus. The teacher helped develop the child-directed play by showing how a policeman behaves after stopping a vehicle.

The researchers' statistical analysis was based on a range of data including:

- behaviours observed amongst the children, for example: listening, imitating, enjoying, agreeing, directing the play, asking and answering questions, finding a solution and demanding help
- the duration of the session in minutes (which depended upon how long the children's interest in the play theme lasted)
- the teacher's performance, measured by the number of stimuli (such as asking and answering questions, encouraging, helping, showing and complimenting the children) used to direct the playing process.

They found:

- no significant difference in teachers' behaviour between direct teaching and group management - the number of stimuli given by the teachers was similar for both forms of class organisation
- significantly more cognitive behaviours associated with thinking, knowing and remembering emerged during group free play managed by teachers when compared with the play activities directed by teachers from the front of the class
- teacher-directed pretend play fostered social and emotional development more than child-directed group play
- the children took greater pleasure in play and learning when they were free to play in groups managed by their teacher than when their play was directed by their teacher.

The researchers argued their results support play-based curricula in programmes for pre-school children. They suggested play supports children's later problem solving skills, social skills and academic areas, such as literacy, mathematics and science.

On the basis of their findings, the authors concluded that both teacher and child-directed play should be offered to achieve a balance between children's social, emotional and cognitive development by, for example following a teacher directed lesson with group free play. They also suggested that teachers who are skilful at intervening in the children's playing process may be able to shift the children's mental, social and emotional development to a higher level in accordance with Vygotsky's theory of the zone of proximal development (ZPD).

Practitioners may find it helpful to read about Vygotsky's theory of ZPD and why he believed play was important in pre-school children's cognitive development, which we summarised in our RoM 'Social

interaction as a means of constructing learning'.

**Reference:**

Gmitrová, V. & Gmitrov, G. (2003) The impact of teacher-directed and child-directed pretend play on c ognitive competence in kindergarten children. *Early Childhood Education Journal*, 30 (4) pp. 241 - 246

## Supporting parents as children's first educators

We chose this case study because it is an example of an effective way of giving parents guidance about the kinds of activities they can do at home to positively affect their children's development.

There are many types of programmes for parents (such as, home-visiting, mother-toddler clubs, child behaviour management and stress management in families) that aim to bring about some change in parenting which will lead to better developmental outcomes for their children. The Peers Early Education Partnership (PEEP) is one such programme. PEEP is a programme for parents and their children aged 0-5. It was initially developed in an economically deprived area of Oxford, but is now expanding throughout Britain.

The study involved parents, children and siblings who attended a one-hour group PEEP session every week during school term-time for two years. Two staff members worked co-operatively to manage each group. The first was the group leader who was responsible for the dissemination of the programme to parents. The second was the group assistant, responsible for supporting the children's play and running the borrowing system at the end of each session.

Each session was divided into two half-hour parts. The first part was devoted to talking time when parents discussed the pre-arranged theme of the week. For example:

'For young children, numbers up to five, or even ten, are the ones that matter. These are 'easy' numbers for us, and can become easy for children too. Children need to play with numbers in many different ways. There are numbers all around us every day. With a bit of help, children quickly get good at spotting them - on houses, buses, birthday cards, in shops, magazines, books, etc. Playing games together and having fun with numbers will help children to do sums and other maths later on'. (From the Autumn season, 'Numbers, numbers everywhere')

'How children feel about themselves is important for learning. Children who feel good about themselves do so for a variety of reasons. One reason is when other people enjoy being with them. Children who feel good about themselves are more likely to want to learn'. (From the Spring season, 'Children's friendships')

'Parents and carers can offer lots of opportunities for children's talking. Children get better and better at talking, when they have lots of things to talk about. They need someone to talk with who listens, joins in and tries to understand. Going out, having picnics and making books together are three good opportunities to encourage talking'. (From the Summer season, 'Things to talk about')

During this time, the children stayed in the room, supported in their play by the group assistant. For the second part, families came together for circle time, when songs, rhymes and stories, often linked with the theme discussed earlier, were shared. At the end of each session, families could borrow play packs and books to use at home.

During the sessions, the leaders modelled different ways of sharing books with the children, including:

- varying the tone of voice
- reading the title of the story and the names of the authors and illustrators

- following the text with their finger
- asking questions about the storyline
- linking the book to the child's first-hand experience
- linking the book to songs or games.

The researchers investigated the developmental progress of 73 children between the ages of three and five, whose parents participated in PEEP, compared to the progress of 86 children whose parents lived in a similar disadvantaged community in which PEEP was not available. The children in each group were similar in age and other characteristics, including their language and thinking skills. No differences were found in attainment between the two groups of children at the beginning of the study. The pre-schools they attended were similar in quality.

The researchers' statistical analysis showed that the children whose parents participated in the PEEP sessions made significantly greater progress in their learning than the children whose parents did not participate. The gains were in the following areas

- vocabulary
- language comprehension
- understanding about books and print
- number concepts.

In addition, the children whose parents participated in PEEP had higher self-esteem than the children whose parents did not participate.

**Reference:**
Evangelou, M & Sylva, K. (2003) The effects of the Peers Early Educational Partnership (PEEP) on children's developmental progress. DfES Research Report 489. [Online].

## Involving parents in their children's education

We chose this case study because it shows how a nursery encouraged parents to take part in educational activities with their children. Both parents and children benefited from the experience.

This project set out to build on the success of an initial home-link project involving two teddy bears called Beryl and Barney who accompanied a different child home each night. The children were encouraged to take a teddy-bear home and have 'adventures' with the bear. The next day, the children told the adventures to nursery staff who wrote their stories down. The children then drew pictures of their adventures. This was a successful project and one that occurs in a variety of forms in many nurseries across the country.

For this project, the children were trained to use a digital camera to record their teddy bear adventures and activities at home. For example, the bears read books, went shopping and cycling, and also raided food cupboards in the dead of night leaving the children with no breakfast! Beryl and Barney also featured in two local newspapers with Barney photographed reading the article about himself! Parents received initial training with the equipment during a nursery session and were asked to support their children's creative and imaginative use of the technology at home. Parents were also invited into the nursery to help their child download and print off the photos.

The children liked the immediacy of the photos - as soon as a picture was taken they liked to view it on the LCD display on the back of the camera. The photographs were also a huge success when displayed on the nursery laptop using the slideshow facility. The children enjoyed sharing their pictures with others - telling both adults and peers about the photos and what the bears were doing. The children often gathered in twos or threes to chat about the photos.

The children were proud of their ability to take photos without adult help. In a questionnaire sent home, the overwhelming response was that the children liked to take photos on their own. Staff observed how children with special educational needs showed enjoyment and improved use of language from using the cameras. Two children who rarely used language for communication, showed a marked improvement when given pictures of themselves with the bears. For other children, it increased independence, story writing and sequencing skills, creative skills, language and communication skills.

Parents commented how the project had strengthened their involvement with their child's education:

'It is good to be able to take part in what they do at nursery, especially for the parents who can't manage nursery sessions to help.

'I know more about what he does at school' and 'in a way we are learning together.'

**Reference:**
Gooch, E. (2002) 'Beryl and Barnie's Digital World'. ICT learning and Teaching Scotland [Online]

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## Further reading

**What else might I enjoy reading?**
QCA/DfEE, (2000) *Curriculum guidance for the Foundation Stage.* London: QCA.

QCA/DfEE. (1999) *Early learning Goals.* London: QCA.

The Treasury (2003) *Every Child Matters*. London: HMSO.

*Technical Paper 10 - The EPPE Project: Intensive Case Studies of Practice across the Foundation Stage*. Siraj-Blatchford, I., et al, (2003) DfEE / Institute of Education, University of London

Sylva, K., Taggart, B, Melhuish, E., Sammons, P. & Elliot, K. (1999) *Technical Paper 6 - The EPPE Project: Characteristics of the Centres in the EPPE Sample: Observation Profiles*. DfEE / Institute of Education, University of London.

Sylva, K., Taggart, B, Melhuish, E., Sammons, P. & Elliot, K. (1999) *Technical Paper 6a - The EPPE Project: Characteristics of Pre-School Environments*. DfEE / Institute of Education, University of London.

Davies, J. & Brember, I, (1997) *The effects of pre-school experience on reading attainment: a four year cross-sectional study.* Educational Psychology, 178 (3) pp.255-266.

**The EPPE Project**
*Effective Provision of Pre-School Education (EPPE) Project: Final Report.*
A Longitudinal Study Funded by the DfES 1997-2004 [Online] Available at:
www.dfes.gov.uk/research/data/uploadfiles/SSU_SF_2004_01.pdf (Accessed 22 March 2005)

Further information about the EPPE project and publications is available on the project website at:
http://eppe.ioe.ac.uk/

Iram Siraj-Blatchford, I, Kathy Sylva, K. & Muttock, S. (2002). *Researching effective pedagogy in the early years*. DfES, Research Report RR356. Our RfT summary of the report is available at:
http://www.gtce.org.uk/teachers/rft/pre_prov0705/

**Encouraging parental involvement**

*Peers Early Education Partnership (PEEP) project*
Details of the Peers Early Education Partnership (PEEP) project can be found at: www.peep.org.uk (Accessed 22 March 2005)

*Story Sacks*
'Story Sacks' projects are an excellent way of encouraging parents and carers to get involved in developing both their own literacy skills and those of their children. For information about story sacks visit: www.standards.dfes.gov.uk/parentalinvolvement/pics/pics_storysacks

*Sure Start*
The Sure Start Unit is responsible for policy and standards in relation to regulation and inspection of childcare and nursery education. Practitioners and parents will find the Sure Start framework, 'Birth to three matters', provides useful guidance. Details of the framework can be found at: www.surestart.gov.uk (Accessed 22 March 2005)

**Related Research**

*Inequality in the early cognitive development of British children in the 1970 cohort.*
Summary available at:
www.standards.dfes.gov.uk/research/themes/early_years/ThuApr221020482004 (Accessed 22 March 2005)

*Learning from their mistakes: glimpses of symbolic functioning in two-and-a-half to three-year-old children.*
Summary available at: www.standards.dfes.gov.uk/research/themes/early_years/FriMar191511092004/ (Accessed 22 March 2005)

*Pupil mobility, attainment and progress during Key Stage 1: a study in cautious interpretation.*
Summary available at: www.standards.dfes.gov.uk/research/themes/inclusion/TueMar20935332004/ (Accessed 22 March 2005)

*The impact of teacher-directed and child-directed pretend play on cognitive competence in kindergarten children.*
Summary available at:
www.standards.dfes.gov.uk/research/themes/early_years/FriApr21051132004 (Accessed 22 March 2005)

*The long-term contribution of early childhood education to children's performance - evidence from New Zealand.*
Summary available at: www.standards.dfes.gov.uk/research/themes/early_years/WedMar241201102004/ (Accessed 22 March 2005)

**Related research**

*Early years learning and development - a literature review:*
http://publications.education.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-RR176&

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## Appraisal

*The Effective Provision of Pre-School Education (EPPE) Project: Final Report.*
Sylva, K. Melhuish, E. Simmons, P. Siraj-Blatchford, I, & Taggart, B. (2004)
A longitudinal study funded by the DfES 1997-2004

**Robustness**

This Effective Provision of Pre-school Education (EPPE) project was a longitudinal study of three to seven year olds in England. The researchers used a value added approach to investigate the educational effectiveness of a range of pre-school settings. They set out to assess:

- the impact of pre-school on children's intellectual and social/behavioural development
- whether some pre-schools were more effective than others
- the characteristics of an effective pre-school setting
- the impact of home and childcare history on children's development
- whether or not the effects of pre-school continue throughout Key Stage 1 (ages six and seven years).

The study was informed by a review of the policy context in relation to pre-school provision and previous research. The authors drew on longitudinal research from the US that found lasting effects of high quality early intervention. They noted the limitations of longitudinal studies in the UK that did not collect baseline data of children's attainments on entry to pre-school and explained why they chose to use a value added approach rather than randomised controlled trials.

The study involved six local education authorities and covered urban, suburban and rural geographic areas. Six different types of pre-school settings were investigated: local authority day nurseries, integrated care and education centres, playgroups, private day nurseries, nursery schools and nursery classes. The sample consisted of 141 settings, from which, a random sample of 2,800 children were recruited. They were followed from age three to seven during 1997-1999. The researchers also recruited 300 children who had minimal or no pre-school experiences at the time that the main sample entered reception classes.

Three main data sets were collected: children's attainment and development at different points in time; information about their personal, social and family characteristics and information about pre-school settings. The rigorous analytical strategy adopted by the researchers allowed them to link these data sets. For example, they conducted value added analyses that enabled them to take account of child, parent and home factors and to run multi level analyses to establish the contribution of the various pre-school settings or that of 'home children'. In addition, they conducted case studies of a sample of excellent pre-school settings to identify effective practices.

**Relevance**

The topic of this study will be of interest to teachers of young children, professionals who advise and support them, parents and policy makers. The researchers sampled a wide range of early years' settings and a large sample of children and their parents, so the study is likely to enable many early years' practitioners to make links with their own practice. The data collected was subjected to valid statistical analysis.

Practitioners may also be interested in the sub studies and related studies that were reported:

- the Early Years Transition and Special Educational Needs project, a sub study of the EPPE project, investigated young children who might be 'at risk' of special educational needs
- the Effective Pre-school Provision in Northern Ireland project which explored similar topics
- a continuation study (begun in 2003 and running until 2008) is following the impact of pre-school experiences through to age eleven.

**Applicability**

The study focused on the effect of early years' provision in a range of settings. It identified the most effective types of early years' settings and found evidence of positive learning gains in young children, which continued during Key Stage 1. The researchers gave examples of good quality adult-child interactions from case studies of excellent early years' settings. Of particular note was the practice they identified of 'sustained shared thinking' where two or more individuals worked together in an intellectual way to solve problems. They also reported ways in which parents had had a positive influence on their child's development and pointed out the role early years' practitioners had in providing support and encouragement for them.

**Writing**

This study is written in an interesting and relatively jargon-free style. The findings are clearly identified and reported under a range of headings which will be helpful to readers. Technical data are explained sufficiently to enable most readers to understand the research methodology and analysis. The appendices usefully contain more details of in depth analyses of child, family, pre-school and impact data and give references to a number of technical papers.

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