

## **Introduction**

The Effective Pre-school Provision in Northern Ireland (EPPNI) project is a longitudinal study that employs qualitative and quantitative methods to explore the effects of pre-school experience on children's attainment and progress on cognitive and social/behavioural development at entry to school and up to 8 years of age. In addition to pre-school effects, the study investigates the contribution to children's development of individual and family characteristics such as gender, family size, parental education and employment. The EPPNI project was funded by the Department of Education, the Department of Health, Social Services and Public Safety and from an inter-departmental budget, over the period 1998-2005.

The EPPNI and EPPE projects investigate three issues that have important implications for policy and practice:

- The effects on children of different types of pre-school provision,
- The 'structural' (e.g. adult-child ratios) and 'process' characteristics (e.g. interaction styles) of more effective pre-school centres, and
- The interaction between child and family characteristics and the kind of pre-school provision a child experiences.

## **The 8 aims of the EPPNI Project**

- To produce a description of the 'career paths' of a large sample of children and their families between entry into pre-school education and completion of Key Stage 1.
- To compare and contrast the developmental progress of 800+ children from a wide range of social and cultural backgrounds who had differing pre-school experiences.
- To separate out the effects of pre-school experience from the effects of primary schooling.
- To establish whether some types of pre-school are more effective than others in promoting children's cognitive and social/behavioural development.
- To identify the characteristics of pre-school education found to be most effective.
- To investigate differences in the progress of different groups of children, e.g. children from disadvantaged backgrounds and both genders.

- To investigate the medium-term effects of pre-school education on educational performance at Key Stage 1 in a way which will allow the possibility of longitudinal follow-up at later ages to establish long-term effects, if any.
- To investigate the role of pre-school provision in combating social disadvantage and exclusion.

### **Methods:**

The EPPNI study is a longitudinal, cohort study chosen because of its generalisability across regions in the country, across social class, and its capacity to describe the effects of a range of Early Years provision, e.g., playgroups, private day nurseries, nursery schools/classes and reception classes and groups.

The aims of the EPPNI study were investigated using a range of methods such as; standardised child assessments taken over time, child social/behavioural profiles parental interviews, interviews with pre-school centre staff, quality rating scales and case study observations and interviews.

### **The sample: regions, centres and children**

In order to maximise the likelihood of identifying the effects of various types of provision, the EPPNI sample was stratified by type of centre and geographical location. All 5 Northern Ireland Education and Library Board areas were included in the research, and pre-school centres were selected randomly, but strategically stratified by type from these areas.

The four main types of provision were included in the study; playgroups, private day nurseries, nursery schools/classes, and reception classes/groups. In order to enable comparison of type of provision effects, the project recruited 685 children from 80 centres. Within each ELB area, centres of each type were selected by stratified random sampling and, due to the small size of some centres in the project (e.g. rural playgroups), more centres were recruited than originally proposed (80 rather than 60).

Children and their families were then randomly selected from each centre. More than 150 children with no or minimal pre-school (i.e. sessional) attendance were also recruited from the same year 1 class as the EPPNI children (at school entry), known as 'home' children. The total original sample including 'home' children is 837 participants. All parents gave signed consent and participated in a detailed interview when their children were enrolled in the study. This was followed up with questionnaires/interviews once the children were in school.

## **Child assessments**

**Pre-school assessment (3 years)** – around the 3<sup>rd</sup> birthday, or 4<sup>th</sup> birthday if the child entered pre-school after 3 years, the children's cognitive ability was assessed by a researcher on four cognitive tasks of the British Ability Scales; verbal comprehension, naming vocabulary, knowledge of similarities seen in pictures, and block building. The children's social and behavioural development was also assessed using the Adaptive Social Behaviour Inventory (ASBI). This was completed by a member of pre-school staff who knew the child the best. If the child changed pre-school before school entry, he or she was assessed again.

**Beginning of Primary 1 assessment (4 years)** - Children's cognitive ability was again assessed using a similar battery of tests as the BAS, including; pattern construction, verbal comprehension, naming vocabulary, knowledge of similarities using picture and early number concepts by a researcher. Tests also included literacy measures (knowledge of the alphabet, rhyme and alliteration); these were then computed giving an overall measure of reading ability at the beginning of primary 1. A social behaviour profile was completed by the teacher to measure the child's social behaviour development.

**End of Primary 1 assessment (4-5 years)** – Children's cognitive ability was assessed by a researcher on early number concepts, BAS word reading, dictation and literacy measures. A similar social behavioural profile of the child was again completed by the teacher.

**End of Primary 2 assessment (6 years)** – Children's cognitive ability was tested by standardised assessments of reading and mathematics, information on school progress, attendance and special educational needs. A measure of the children's social behaviour was collected via the Goodman's Strength and Difficulties Questionnaire, completed by the class teacher.

**End of Primary 3 assessments** – Children reported on their attitudes to school by completion of an 'All About Me' questionnaire. Social behaviour was tested again by the teacher by completing, The Goodman's Strengths & Difficulties Questionnaire and related measures.

**End of Primary 4 (Key Stage 1) assessments** – Key Stage 1 results for each child were collected from the school.

## **Measuring child/family characteristics**

**Parental interview** – After completion of the child’s first assessment, their parent or guardian was interviewed, this was generally the child’s mother. Interviews were completed either in person at the pre-school centre, or by telephone. The interview was semi-structured with answers to most questions being coded into set categories, and a small number of open-ended questions that were coded post hoc. The length of interviews varied with most taking between 20-40 minutes depending on the complexity of the information given by the parent. Questions gathered information about the family, the child’s health, development and behaviour, the child’s activities in the home, the use of pre-school provision and the childcare history as well as, ‘child factors’ such as birth weight, gender, language, birth order, health and development problems.

## **Pre-school Characteristics and Processes**

**Quality of pre-school Provision:** Extensive interviews with the centre managers that included information on child/staff ratio, staff training, aims, policies, curriculum, parental involvement, etc., as well as conducting observations of typical activity in centres was conducted by researchers. Process characteristics such as the day-to-day functioning within settings (e.g. child-staff interaction, child-child interaction, and structuring of children's activities) were studied using the following measures:

**The Early Childhood Environment Rating Scale –revised:** this measured seven sub-scales

1. space and furnishings
2. personal care routines
3. language reasoning
4. activities
5. interaction
6. programme structure
7. parents and staffing

**The Early Childhood Environment Rating Scale- extension:** This measured four subscales

1. Language
2. Mathematics
3. Science and environment
4. Diversity

**The Caregiver Interaction Scale:** assessed four aspects of staff-child interaction of the main pre-school worker

1. positive relationships,
2. permissiveness,
3. detachment
4. punitiveness

### **Case Studies**

Detailed qualitative data was also collected using case studies of 3 centres chosen on the basis of their ratings of observed quality to represent examples of good quality provision from 3 types of provision (a fourth case study was abandoned due to difficulties in time constraints). This added the fine-grained detail about how processes within centres articulate, establish and maintain good practice. These detailed case studies used a variety of methods of data gathering, including documentary analysis, interviews and observations to illuminate the characteristics of more successful pre-school centres and assist in the generation of guidance on good practice.

### **Questions from final paper:**

1. What is the impact of pre-school on children's intellectual and social/behavioural development?
2. Are some types of pre-school more effective in promoting children's development?
3. What are the characteristics of effective pre-school settings?
4. What is the impact of the home and childcare history on children's development?
5. Do the effects of pre-school continue through Key Stage 1?