2001

Seven Years Old: School Experience in Ireland: National Report of the IEA Preprimary Project (11)

Noirin Hayes
Technological University Dublin, noirin.hayes@tudublin.ie

Margaret Kernan
Technological University Dublin

seven years old

Seven Years Old
School Experience in Ireland

National Report of the IEA Preprimary Project (II)

Nóirín Hayes & Margaret Kernan

Seven Years Old: School Experience in Ireland

National Report of the IEA Preprimary Project (II)

ISBN 1 900 454 165

Published by the Dublin Institute of Technology, Dublin, Ireland.
Photography by Moya Nolan

Design & Print by Printwell Co-op, 10-11 North Richmond Street, Dublin 1. 01 855 0873

Contents

Acknowledgements

The authors would like first and foremost, to thank all the children and their parents who have participated in the IEA Preprimary Project since 1994. Gratitude is also due to the class teachers and school principals who facilitated data collection in their schools and classrooms and who gave so generously of their time.

The project has been supported by an Advisory Board comprising Anne Fitzpatrick, Dublin Institute of Technology, Gabriel Harrison, Department of Education and Science, Eilis Hennessy, National University of Ireland, Dublin, Anne Marie Herron, St. Kevin's Junior School, Donaghmede, Helen Johnston/David Silke/Leona Walker[1], the Combat Poverty Agency, Ann Quinn, representing parents involved in the project, Marion Murphy, National University of Ireland, Cork, Deirbhile Nic Craith, Irish National Teachers' Organisation and Siobhán Ní Mhuirthile, Mary Immaculate College of Education, Limerick. The authors would like to acknowledge the expert advice and support provided by this group.

Sincere acknowledgements are also due to Pat Olmsted and her colleagues in the High/Scope Education Foundation, the international co-ordinating centre of the project who provided technical support at critical points in the project.

Data collection would not have been possible without the team of 44 data collectors (listed separately in the Appendix) and those who assisted with data entry: Miranda Cooke, Sarah Quinn and Janet de Hóra.

The authors would also like to acknowledge the support of our colleagues within the Centre for Social and Educational Research (CSER) especially Lorna Ryan, Sinéad Riordan, and Audrey Warren.

This Project has been funded by the Combat Poverty Agency and the Department of Education and Science - the financial support is gratefully acknowledged.

The views expressed in this Report are the authors' own, and do not necessarily reflect those of the above organisations or individuals. We accept full responsibility for the content and for any errors or omissions.

[1]Representation from the Combat Poverty Agency on the Project Advisory Board changed over the period of Phase 3 of the IEA Preprimary Project.

List of Figures

List of Tables

Executive Summary

Introduction

The IEA Preprimary Project is a large cross-national investigation into the years prior to a child's entry into compulsory education (age six in Ireland) and the period of transition into primary school. The project was designed to assess the need for, and the utilisation of, early childhood care and education, the quality of the child's experiences in these settings and the growing role that various care and educational arrangements play in the development of the world's young children. Ireland joined the project in 1994 when data on 396 four-year-old children and their families were gathered. These children and their families were again contacted in 1997/98 when the children were aged seven years. This report, on Phase 3 of the Irish element of the IEA Preprimary Project, presents data which will inform policy development, particularly in the area of education.

Sample and methodology

In total, 374 children (193 boys and 181 girls) and 249 teachers in 194 schools participated in Phase 3 of the study. This represents a tracking rate of 94 per cent between Phase 2 and Phase 3. The Phase 3 sample children attended primary schools in 23 counties of the Republic of Ireland. The breakdown of settings was as follows: 175 children were attending Designated Disadvantaged (DD)[1] schools and 199 were attending Non Designated Disadvantaged schools (NDD).

The six measurement instruments developed for Phase 3 comprised two questionnaires and four child developmental status measures as follows:

- Family Background Interview
- Teacher Interview
- Child Development Status Measurements
  - Cognitive Development Status Measure
  - Language Development Status Measure
  - Social/Emotional Status Measure
  - Academic Status Measure.

[1] Five of the DD schools were also participating in the 'Breaking the Cycle' Scheme. Three of the schools categorised as DD are rural schools who joined the Rural Breaking the Cycle Pilot Project in 1996. These schools are not included in the DES Disadvantaged Areas Scheme but for the purposes of the IEA Preprimary Study are categorised as Designated Disadvantaged.

The project co-ordinator and the team of 44 data collectors collected data between March 1997 and September 1998.

The following is a summary of the main findings.

Children and their families

- Ninety per cent of the sample children had attended some form of early childhood care and education service before beginning primary school. The majority of these children (75 per cent) had availed of a sessional or playgroup type service.
- The mean primary school starting age amongst the sample was 4 years 7 months. Children in DD schools were on average, 2 months younger starting school than children attending NDD schools.
- The majority of parents (88 per cent) reported no significant change in the health of their child between 4 and 7 years.
- Forty per cent of parents reported a significant change in family structure since they were last interviewed when their child was 4 years. This change in structure could have included birth of a new baby, death of a grandparent, separation of parents, or death of a sibling or parent.
- More parents of children attending DD schools (29 per cent) than children attending NDD schools (19 per cent) reported a period of emotional upset for the children between ages 4 and 7 years.
- The majority of parents rated the quality of their child's care in school as being excellent with the most recent/current experience rated most highly (75 per cent rated it as being 'excellent').
- Whilst 86 per cent of parents of children attending NDD schools and 70 per cent of parents of children attending DD schools would like their child to complete 3rd Level education, 72 per cent of NDD parents and 55 per cent of DD parents felt that their child would actually achieve this.
- Eighty-nine per cent of mothers interviewed were married at the time of interview. Seventeen per cent of mothers of children in DD schools and 5 per cent of mothers of children in NDD schools were not married.

- Mothers and fathers of children attending NDD schools had remained in full-time education for a period of 2 years over and above their counterparts in DD schools.
- Fifty-one per cent of mothers overall and 81 per cent of fathers were engaged in paid employment. Looking at the breakdown between DD and NDD schools, more parents of children in NDD schools (56 per cent, mothers; 91 per cent, fathers) were in paid employment than parents in DD schools (46 per cent, mothers; 67 per cent, fathers).
- Average family income was significantly lower in families of children attending DD schools (£12,000) than those attending NDD schools (£21,500).
- The percentage increase in income of families of children in DD schools between Phase 2 and Phase 3 was 9 per cent, whereas for families of children attending NDD schools, it was 32 per cent.

School experience of 7 year-olds

- Teachers reported that children spent more time on English (28 per cent) than any other curricular area. This was followed by Irish (21 per cent) and Mathematics (16 per cent).
- Children in DD schools spent less time on Mathematics and Irish and more time on English than children in NDD schools. There was very little difference between DD and NDD schools on the amount of time spent on all other curricular areas.
- The average class size in DD schools was 24 children and in NDD classrooms, 30 children. The largest class size noted was a class of 38 children which was in a NDD school.
- The majority of classrooms (92 per cent) had just one adult working in them.
- Sixty-seven per cent of the sample children were in 1st class and 32 per cent were in 2nd class at the time of data collection. The remaining children (2 per cent) were in Senior Infants.
- The availability of equipment was similar in DD and NDD schools with the majority of teachers replying that they had access to the named items of equipment.
- Sixty-three per cent of teachers in NDD schools and 58 per cent in DD schools replied that computers were available for the children's use.
- Ninety per cent of the participating class teachers in the study were women and all teachers had a teaching qualification. Seventy one per cent had a primary degree and six per cent had a degree at masters level.
- Teachers in NDD schools had on average, completed more years' teaching (18 years) than teachers in DD schools (15 years).
- The most frequently identified type of parental involvement was "help with homework" (93 per cent), followed by "assisting with fund raising" (92 per cent) and "attending meetings" (89 per cent). Teachers in NDD schools reported a higher level of parental involvement in all categories. The exception to this was in the category of "reading to children".

Children's developmental status at age 7

- Children attending DD schools scored lower in cognitive development, language development, mathematics, reading comprehension and science than children attending NDD schools. The difference in scoring in all areas was statistically significant.
- Children attending DD schools scored higher in perceived competence and social acceptance than those attending NDD schools.
- Overall, girls scored higher than boys, although only marginally so, in cognitive development, language development, and reading comprehension.
- Boys scored higher than girls overall, in mathematics and science.
- Boys attending DD schools scored lower than any other group on all measures except perceived competence and social acceptance where their scores were similar to other groups. Boys attending NDD schools scored highest on all measures except perceived competence and social acceptance.
- Overall, teachers rate the children's cognitive competence lower than either the children's ratings of themselves, and the parents rating of their children.
- Teachers in both DD and NDD schools rated girls higher than boys on cognitive competence.
- Girls in DD schools received the highest rating of cognitive competence from their parents.
- Teachers and children matched most closely in their ratings in the area of peer acceptance suggesting that teachers have a good understanding of the peer relationships among the children in their class.

Conclusions and recommendations

The results from this study broaden our understanding of the experience of children attending primary school in Ireland. A primary aim of the study was to study the differences, if any, between children attending designated schools and their peers attending non-designated schools. Although not a study of economic circumstances, the study confirms that children attending designated disadvantaged schools are in households with a low average annual income.

The study provides the first published data, using a nation-wide sample, on curricular organisation and the allocation of class time by teachers. The study also highlights a variety of differences between DD schools and those not so designated. The DD schools were all in receipt of additional departmental funds and preferential pupil teacher ratio. Notwithstanding these advantages, this study found a statistically significant difference between the developmental status of children attending DD schools and those attending NDD schools in favour of the latter.

While in simple terms those children attending NDD schools out performed their peers in DD schools, the situation was more complex when a more extensive analysis of data was carried out. Further analysis is needed to account for the large differentials between boys' achievement in DD and NDD schools.

The study found a difference in the time allocated for Irish and English across the two school groups with more time allocated to English (30 per cent) than to Irish (19 per cent) in DD schools. In other subject areas there was a strong consistency across all classrooms in the organisation of time. The discrepancy between the recommended time allocation for English (17 per cent) and that reported (28 per cent) is noteworthy, particularly in that it seems to take time from the areas of Art and Crafts and Social and Environmental Studies. The findings in this study refer to the 1971 *Primary School Curriculum* (1999). The publication of the revised *Primary School Curriculum* may lead to alterations in time allocation and subject organisation.

The findings presented in this report suggest additional opportunities for research. These include:

- A study to identify the level of emotional upset, and its impact, on young children, the factors causing stress and the processes for supporting children and their families as necessary.
- A study to establish what choice parents have with regard to early educational services, what types of service parents most value for their children and how this differs as children grow and develop.
- A study to investigate how the widening relative income gap is impacting on families with young children and how this, in turn, is affecting their school achievement.
- A replication of aspects of this study investigating the organisation and allocation of class time to assess how the introduction of the revised *Primary School Curriculum* is impacting on teacher practice and children's classroom experiences.
- A comprehensive study to establish current theory and practice with respect to parental involvement, at both early and primary education in Ireland.
- A study to identify what factors contribute to the finding that the boys in this sample attending NDD schools outperformed all other groups on most developmental status measures studied while their male counterparts, attending DD schools, perform significantly below all groups.

Chapter 1

The IEA Preprimary Project: Background Information

The IEA Preprimary Project: Background Information

1.1 Project rationale

Ireland is just one of many countries world-wide where the demand for early childhood services has become a major policy issue. At the same time, a growing body of research is demonstrating the long-term benefits of high-quality early childhood programmes, thus increasing the general awareness of the importance of children's early years (National Research Council, 2000; Shonkoff & Phillips, 2000).

These developments point to a need for sound and adequate information on which to base early childhood policy decisions and programme development. Nations throughout the world, acknowledging this need, are beginning to realise the benefits of the collection and sharing of information with one another about their early childhood services. In response to this movement towards early childhood information sharing, the International Association for the Evaluation of Educational Achievement (IEA)[1] supported the development of the IEA Preprimary Project.

The IEA Preprimary Project is a large cross-national investigation into the years prior to children's entry into compulsory education (age six in Ireland) and the transition into primary school. The Project was designed to assess the need for, and utilisation of, early childhood care and educational arrangements, the quality of the child's experience in these settings, and the growing role that various care and educational arrangements play in the development of the world's young children. As a cross-cultural and cross-national study, it was felt that this project would be especially valuable in strengthening and deepening understanding of the impact of early experiences on young children's development (Crahay, 1990).

The IEA Preprimary Project was designed in the following three interrelated phases:

Phase 1 (1986 - 1992)

Phase 1 produced profiles of national policies on the care and education of young children (Olmsted & Weikart, 1989; 1994) and surveyed households to identify and characterise the major early childhood care and educational settings used by families with 4-year-olds. Ireland did not participate in this phase of the project.

Phase 2 (1993-1997)

Phase 2 used extensive observational and interview data to examine the interactive and structural characteristics of the major early childhood settings and to explore the impact of expectation, curricular and familial factors on children's development status at age four. Fifteen countries including Ireland took part in Phase 2. Ireland's participation in Phase 2 of the IEA Preprimary Project is reported on in *"A Window on Early Education in Ireland: the First National Report of the IEA Preprimary Project"*[2].

Phase 3 (1997 - 1999)

Phase 3 completes the IEA Preprimary Project, documenting how early experiences affect children's development at age 7. The present report presents the findings of Phase 3 in Ireland. Thirteen countries including Ireland took part in Phase 3.

1.2 Conceptual framework

The conceptual framework for the IEA preprimary project is based on the ecological systems model of development proposed by Bronfenbrenner (1979; 1992). Central to this model is the view that development is an evolving process of organism-environment interaction. The person is seen not as an individual object for study and analysis, but as an active agent in the social process of his/her development over time. For those interested in young children's learning, the ecological model gave voice to the reality that the individual learner's experience is linked to interactions with and between the learning environments, whether the environment is that of the home, the preschool, the school or the wider world (Bronfenbrenner, 1995; Burchinall, Ramey, Reid & Jaccard, 1995). Recognising the value of the ecological approach to researching child development, the IEA Preprimary Project was designed to examine the complex interactions between the child, the family, the teacher and the environment in exploring children's development at four and at seven years.

[1] The IEA is a non-governmental, non-profit organisation of research institutions, universities, and ministry of education units in some 50 countries. It is well known for its 25 years of comparative international surveys in sciences, maths, written composition and other academic areas. As surveys have identified specific educational problems and policy makers have made decisions based on these research findings, IEA findings have affected educational systems around the world.

[2] Hayes, N., O Flaherty, J with Kernan, M. (1997) A Window on Early Education in Ireland: The First National Report of the IEA Preprimary Project. Dublin: Dublin Institute of Technology, is available from Early Childhood Research Unit at the Centre for Social and Educational Research, DIT on request.

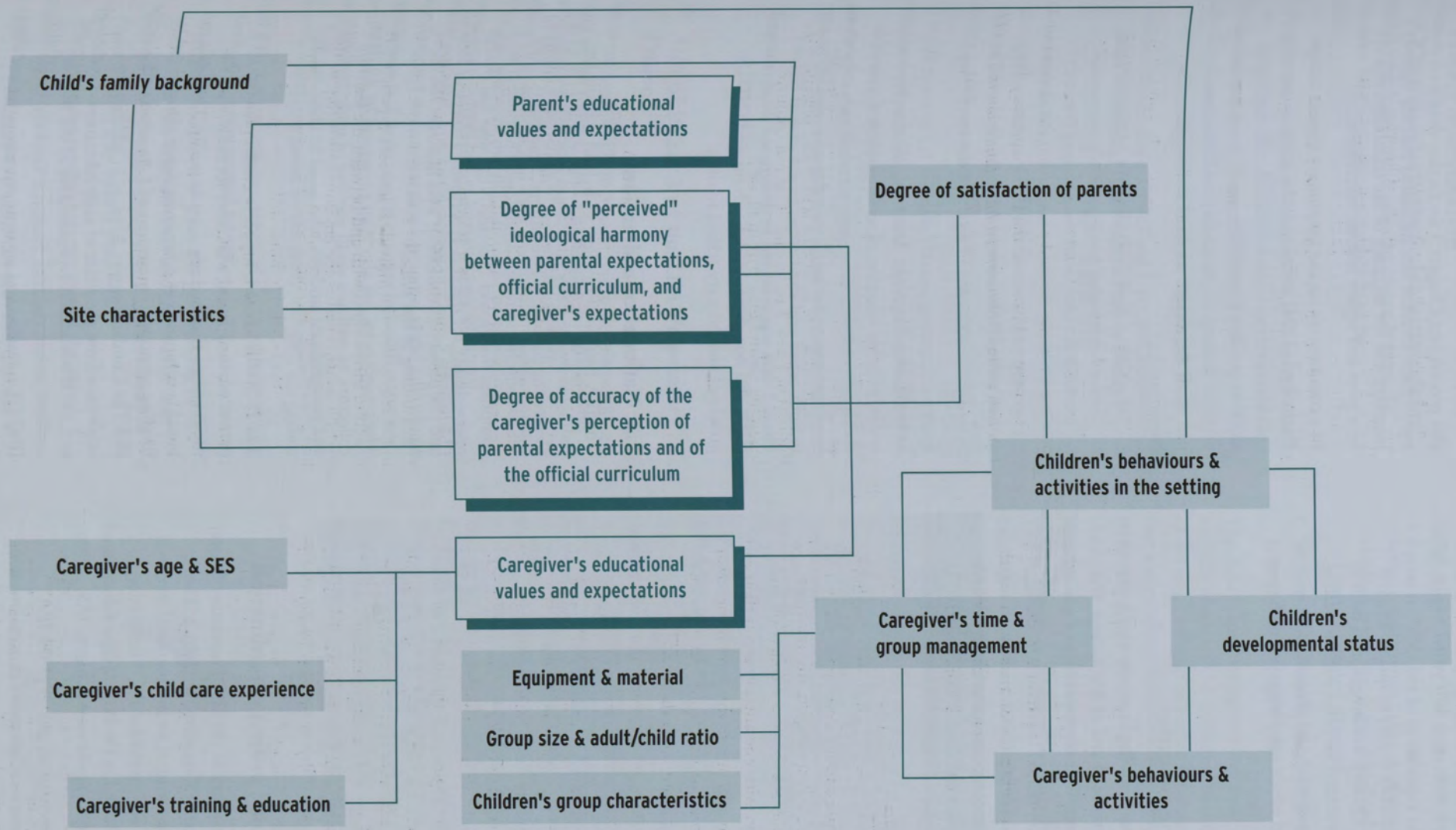


Figure 1.1 IEA Preprimary Project conceptual framework

One of the features of Phase 2 of the IEA Preprimary Project (when sample were aged four years) was its focus on the quality of the experiences of the children sampled and the efforts to identify factors of quality in early childhood settings. Quality was investigated both in terms of *static* or structural variables such as staffing, ratios, materials, equipment and *process* factors such as the style of care and education, interactions between children and staff.

1.3 Participating countries

In total, 17 countries from five continents took part in one or more of the three phases of the Project. The participating countries were representative of a number of factors: geographical, cultural, linguistic, economic and socio-political.

Table 1.1 Participating countries in the IEA Preprimary Project

Country	Phases
Belgium (Fr.)	1&2
China	1&2
Finland	All phases
Germany	1
Greece	2&3
Hong Kong	All phases
Indonesia	2&3
Ireland	2&3
Italy	All phases
Nigeria	All phases
Poland	2&3
Portugal	1
Romania	2&3
Slovenia	2&3
Spain	All phases
Thailand	All phases
United States	All phases

1.4 Cross-national project co-ordination

Each participating country in the IEA Preprimary Project had a National Research Co-ordinator (NRC). The overall project management at an international level was the responsibility of an International Co-ordinating Committee (ICC) located at the High/Scope Educational Research Foundation in Ypsilanti, Michigan, U.S.

Instrument development at all phases of the IEA Preprimary Project was a collaborative process involving the NRC's of all the participating countries. Cultural sensitivity of instruments was a priority at all phases in this process (see Chapter 3 for further details on measures used). Each measure was translated into the country's language and the accuracy of the translation was verified by a pilot and review systems mechanism.

In a commentary on the Preprimary Project design, Kagitcibasi (1994) commends the study as one of truly collaborative cross-cultural research. She highlights the fact that at every phase of the study there was shared decision making, responsibility, and contribution on the part of all the various national investigators. She comments

> *that what is more commonly seen in international research is unequal participation by the various research partners, with the developed countries usually doing the conceptualisation and instrument development, and the developing countries doing only the data collection.*
>
> (Kagitcibasi, 1994, p.350)

Each participating country selected 1,2 or more types of early childhood settings. The final selection represents the widest possible selection of settings where 4 year-old children spend their time and included such settings as kindergartens, nurseries, family day care, and home care in both urban and rural areas. In the case of Ireland Phase 2 data was collected in designated disadvantaged (DD) and non-designated disadvantaged (NDD) preschool and primary school settings.

1.5 National co-ordination

The IEA Preprimary Project in Ireland is being co-ordinated by the Early Childhood Research Unit at the Centre for Social and Educational Research (CSER) in the Dublin Institute of Technology. The project team comprises the Project Director/NRC who has overall responsibility for the IEA Preprimary Project in Ireland and the project co-ordinator, who manages the day-to-day running of the project.

The project team has also been supported by 44 data collectors, as well as a small number of undergraduate and postgraduate students who assist in checking and coding the data.

The Project is advised, supported and evaluated by a ten-person advisory board who meet formally with the project team two to three times annually. The advisory board is comprised of representatives of the two public funding agencies: Department of Education and Science and The Combat Poverty Agency; in addition to academics from the fields of early education, psychology and social sciences. A representative of the primary teachers' union, the Irish National Teachers' Organisation (INTO), a teacher and a parent representative are also members.

1.6 Project dissemination

The ICC is responsible for the final cross-national data analyses which are published in Monograph form. To date three international monographs have been published:

PHASE 1

How Nations Serve Young Children: Profiles of Child Care and Education in 14 Countries
(Olmsted & Weikart, 1989).

Families Speak: Early Childhood Care and Education in 11 Countries, IEA Primary Project Phase 1
(Olmsted & Weikart (Eds.) 1994).

PHASE 2

What Should Young Children Learn? Teacher and Parent Views in 15 Countries
(Weikart, 1999).

Three further monographs are in preparation. These will present findings from the data collected from teachers/carers (Phase 2), observational data (Phase 2) and developmental status (Phase 3) respectively.

1.7 Aim of Phase 3 of the IEA Preprimary Project

The overall aim of Phase 3 as set out in the planning stages of the project, was to investigate the relationship between the experiences of 4 year-olds in early educational settings and their developmental status at age 7, an age when all the children in the participating countries will have had at least one year of formal primary school. The methodology of Phase 3 therefore, was designed to examine developmental status and school experiences at 7 years, major changes in health status and family structure between 4 and 7 years and family background factors.

Specific questions posed by the study include:

- What expectations do parents of 7-year-olds have for their child's educational future?
- Were there major changes in the participating families lives which had affected them and the lives of their 7 year-old children since they were last interviewed at Phase 2 when they were 4 years old?
- What were the family characteristics of the sample children?
- How do teachers of 7-year-olds plan and organise the curricular experience for the children they teach?
- What is the developmental status of the sample children?
- Is there a difference in developmental status between children attending designated disadvantaged settings and non-designated settings?
- Is there a difference in developmental status between boys and girls at age 7 years?

The ICC is conducting cross-national longitudinal analyses which will be published in the final Monograph of the series referred to earlier. Further small scale case by case analyses have been undertaken which investigates the relationship between the developmental status of the children at 4 years and at 7 years. Examples have been reported elsewhere (Hayes, forthcoming).

The Report on the National Forum for Early Childhood Education (Coolahan, 1998) and the White Paper on Early Childhood Education (Department of Education and Science, 1999) both highlight the need for more research into early childhood education in the changing circumstances of Irish society. The IEA Preprimary Project, as a longitudinal study which has researched the experiences of a sample of Irish children since 1995, is a significant contribution to the research base informing social and educational policy development.

1.8 Outline of the report

The report begins by documenting some of the demographic, economic and social changes in Ireland which may have impacted on the lives of the Irish children involved in the IEA Preprimary Project. Chapter 2 also outlines a number of developments in education policy which may also have impacted on their experiences as 7-year-olds in primary school. This is followed by a chapter which details the methodology of the project. Chapters four to six present the results of the study. Each chapter begins with a literature review and is followed by a description of the instruments, the findings, a brief discussion and a summary of the main findings. The final chapter of the report reflects on the findings and future direction for both policy and research.

Chapter 2

Developments in Education Policy in Ireland 1994 – 1998

Developments in Education Policy in Ireland 1994 – 1998

The years 1994 to 1998 represent the period of Ireland's involvement in the IEA Preprimary Project to date. In 1994 and 1995, data was collected on the experiences of a sample of 396 4-year-olds in selected settings outside the home. Three years later, in 1997 and 1998, the same children were revisited at age 7 years. This chapter outlines some of the demographic, economic and social changes in Ireland which may have impacted on the lives of these children.

2.1 Changes in the labour force

The 1990's has brought rapid change to Ireland at a number of levels. Unemployment rates almost halved between 1994 and 1998. In 1994, the seasonally adjusted annual average unemployment rate was 14.1 per cent. By 1998, that figure had been reduced to 7.4 per cent (CSO, 2000a). Labour force participation of women, which had been steadily increasing since 1988, had reached 39 per cent in 1994. By 1998, it was 44 per cent. A closer look at the Labour Force Surveys between 1994 and 1997 show that employment rates of mothers increased from 43.9 per cent in 1994 to 49.2 per cent in 1997(CSO, 2000b). It is also of note that in 1996, 29.3 per cent of mothers with youngest children aged 2 to 4 years were in full-time employment and the figures for mothers with youngest child age 0 to 24 months was 35 per cent, providing proof of the now well documented trend of mothers of younger children remaining in the labour force (National Childcare Strategy, 1999). During this period, birth rate figures rose by 1 per cent. The average age of first-time mothers continued to rise, albeit at a very gradual rate. In 1994 it was 29.9 years and in 1998, 30.1 years (CSO, 2000a). The labour force trends outlined were likely to have impacted on families and children in the age range of the IEA Preprimary Project sample.

2.2 Demand for early childhood care and education services

During the 1990's, the growing demand for early childhood care and education services, which accompanied the changes in the labour market, came to the forefront of discussion and became a major policy issue in Ireland. Indeed, the establishment of the Expert Working Group on Childcare in July 1997 under the Partnership 2000 National Agreement for Inclusion, Employment and Competitiveness, aimed to draw the varied strands[1] of early childhood services together to develop a national framework for the development of the childcare sector. The Expert Working Group proposed that the provision of high quality childcare had both social and economic benefits to society and this was particularly so in disadvantaged areas, both urban and rural (National Childcare Strategy, 1999).

This period was characterised by a growing interest at a policy level in children's lives. In addition to the *National Childcare Strategy*, a number of other important policy documents were published in the 1990's which if acted upon, will impact on the quality of the early childhood experiences of young Irish children (Kernan, 2000). These reports include *Strengthening Families for Life: the Report of the Commission on the Family* (1998); the *Report of the National Forum on Early Childhood Education* (1998) and the *National Children's Strategy* (2001).

2.3 Childhood poverty

The 1997 Report of the IEA Preprimary Project, *A Window on Early Education in Ireland* cited findings from an Economic and Social Research Institute (ESRI) study on poverty based on data from the 1994 Living in Ireland Survey. Highlighted among the findings was the fact that in 1994 children faced a higher risk of poverty than adults - the risk for children was almost 30 per cent at the 50 per cent poverty line, and over 40 per cent at the 60 per cent poverty line - for adults the corresponding risks were 18 per cent and 32 per cent. Indeed, compared to other EU countries, Ireland had the highest rate of relative income child poverty in 1994 (Nolan, 2000).

[1] Membership of the Expert Working Group on Childcare included representatives from the National childcare provider organisations, social partners, statutory bodies, Government departments, training organisations and parents (National Childcare Strategy, 1999).

In 1999, a follow-up ESRI study was published which analysed trends in poverty between 1994 and 1997. The study measures poverty at the household level by looking at relative income levels and the experience of deprivation (Callan, Layte, Nolan, Watson, Whelan, William & Maitre, 1999). The 1999 study found that while the percentage of population in income poverty increased between 1994 and 1997, when income was combined with deprivation indicators[2], the results show significant reductions in levels of deprivation since 1994. The findings also indicated that the numbers below a "fixed" poverty line (set at 60 per cent of average income) declined sharply between 1994 and 1997. However, the risk of relative-income poverty[3] remained very high for households headed by an unemployed person, though as the above unemployment rates indicate, the numbers in that situation declined as unemployment rates fell sharply (Callan et al., 1999).

What impact had the decline in unemployment rate on children's lives? According to Callan et al., while the risk of relative income poverty fell for children at both the 50 per cent and the 60 per cent lines, the 1997 survey revealed that approximately 1 in 6 children were in severe or consistent poverty and 1 in 4 children were living in households of below half the average income. More than half of the children who were "consistently poor" in 1997, were in households seriously affected by unemployment. Furthermore, Nolan (2000) found that children living in larger families (3 or more children) continued to be at high risk of relative income poverty, even where the household head was at work. Where the household was relying on social welfare, the poverty risk for such children was very high indeed.

Changes in family structure can sometimes exacerbate levels of poverty, particularly for lone parents and 'no earner' families (Drew, 1998; McLoyd & Wilson, 1991). In Ireland, non-marital births and marital breakdown have together caused an increase in lone parenthood in families with dependent children. Widowhood is also a factor in lone parenthood (Fahey, 1998). In 1996, 13.8 per cent of family units with children aged under 15 were headed by a lone parent (CSO, Census 96, Vol 3, Table 34).

On a related issue, the introduction of the Family Law (Divorce) Act, 1996 which became law in February 1997, marked a watershed in Irish legal and social history (Byrne, 1999 cited in Shannon, 1999). This had followed the Divorce Referendum in November 1995, when the Irish people voted, by the slimmest majorities, to remove the absolute constitutional ban on the dissolution of marriage (Shannon, 1999). In a report on the Divorce Act, it was noted that two years after the introduction of this legislation, many observers were surprised by the slow take up in the divorce jurisdiction after so many years lobbying for its introduction (Horgan, 1999).

2.4 Impact of poverty on children's lives

The experience of poverty has major implications for the well-being, educational experiences, and life chances of children (see Chapter 4 for a review of the literature). In 1997, the Irish government published a National Anti-Poverty strategy (NAPS) which set out an official global poverty reduction target. According to the definition of poverty agreed by the Irish government in NAPS,

> *people are living in poverty, if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources, people may be excluded and marginalised from participating in activities which are considered the norm for other people in society.*
>
> (Government of Ireland, 1997 p.3)

In 1998, the UN Committee on the Rights of the Child highlighted the particular difficulties faced by Irish children from vulnerable and disadvantaged groups including children belonging to the Traveller[4] community, and children from poor families, to enjoyment of their fundamental rights including access to education, housing and health (Children's Rights Alliance, 1998). Regarding the particular situation of Travellers in Irish society, according to Murray (1997), Travellers are becoming more aware of children's educational needs and more Traveller children are attending school. However, Traveller children face the double burden of being a child within a marginalised community

In addition to Travellers, there have been other marginalised groups and communities who began to become a focus of attention in Irish society in 1990's. The mid-1990's saw an increase in immigration reversing an earlier trend of high emigration. Immigrants comprised, returning Irish emigrants, economic migrants, refugees and asylum seekers. Policy makers are only beginning to fully grasp and understand the needs of increasing numbers of asylum seekers and refugees and their families[5].

[2] A basic index of 8 deprivation indicators was developed by ESRI to assess basic deprivation levels including not having adequate heating, a day without a substantial meal, arrears on mortgage, rent, electricity or gas, and the lack of a warm winter coat.

[3] Relative income poverty lines in the Callan et al study are based on percentages of average household income i.e. those who fall below 50 per cent of 60 per cent of average household income.

[4] According to Section 2 of the Equal Status Act, 2000, "Traveller community" means the community of people who are commonly called Travellers and who are identified (both by themselves and others) as people with a shared history, culture and traditions, including historically, a nomadic way of life on the island of Ireland.

[5] In 1994 and 1995 the situation was very different and the IEA Preprimary Project sample did not include a substantial number of children from minority communities.

> *there is a special minority within each minority culture: children. In the dominant society, the children of a minority must endure along with their parents, the problems of social and cultural discrimination, and they are even more exposed to the risk of cultural dissolution.*
>
> (Children of Minorities, gypsies, UNICEF, 1993 cited in Murray, 1997)

2.5 Countering educational disadvantage

Educational disadvantage has consistently been presented as a factor which perpetuates poverty (Boldt & Devine 1998). Indeed, countering educational disadvantage has been to the forefront of Irish public policy in 1990's. Included in the statement of aims of the government White Paper on Education (1995) is the promotion of

> *quality and equality for all, including those who are disadvantaged, through economic, social, physical and mental factors, in the development of their full educational potential.*
>
> (Department of Education, 1995, p.10)

In the context of preschool education, the White Paper goes on to state that when social or economic disadvantages impede a child's potential, justice and equality imply the need for specially designed measures that seek to alleviate or eliminate the sources and consequences of this educational disadvantage (Department of Education, 1995). This position is one which has underpinned much of government policy aimed at reducing educational disadvantage during the 1990's.

Educational disadvantage was also given prominence as one of the five key themes of NAPS. The targets set out in NAPS aimed to decrease the numbers of students with serious literacy and numeracy problems in primary education and reduce the numbers of students leaving school early. The strategies outlined to meet these targets included one which recommended "increased pre-school services, in partnership with community interests, including the development of pre-school interventions designed to address education disadvantage" (Government of Ireland, 1997, p.10). NAPS also recommended consideration of an expansion of the Breaking the Cycle initiative, the enhancement of the Home School Community links scheme, remedial, guidance, and psychological services, and a targeted reduction in class sizes in the early years in education (Government of Ireland, 1997).

There has also been an acknowledgement that interventions to tackle educational disadvantage need to begin as early as possible at preschool and be sustained throughout the primary school cycle (Hayes, 1995; Clancy, 1996; Coolahan, 1998). Furthermore, it has been proposed that the impact of early intervention may extend beyond the child to the home and community (Pugh & De'Ath, 1989; Coolahan, 1998).

Early Start Programme[6]

In 1994, the Department of Education initiated the *Early Start Programme* in eight schools in designated disadvantaged urban areas. The following year the programme was expanded to forty schools. The programme caters for children aged three to four years, with each *Early Start* setting being staffed by a primary school teacher and a child care worker. The rationale for the Early Start programme development was that "acquisition of language and cognitive skills by young children living in disadvantaged areas can be accelerated by exposing them to a planned and sequenced programme of learning experiences presented by skilled adults" (Educational Research Centre, 1998, p.104). An evaluation of the Early Start Programme, which was based on the first two cohorts of Early Start pupils revealed no differences in the cognitive, language and motor behaviour of the Early Start pupils when they reached Junior Infants/Reception Class and the Junior Infant pupils who had not experienced Early Start. However, according to the evaluation report, teachers' perceptions of Early Start pupils were much more positive than the test results showed (Educational Research Centre, 1998).

Breaking the Cycle Scheme

In 1990, a *Scheme of Assistance to Schools in Designated Areas of Disadvantage* was established by the Department of Education. Schools seeking disadvantaged status were assessed and prioritised as to need on the basis of the number of pupils whose families (a) resided in local authority housing (b) held medical cards and (c) were in receipt of unemployment benefit or assistance. This scheme provides special supplementary capitation funding and maximum pupil teacher ratios of 29:1 amongst other benefits (Department of Education and Science, personal communication). Following recommendations by Kellaghan, Weir, Ó hÚllacháin and Morgan (1995) on the organisation of the scheme, the Department of Education established the *Breaking the*

[6] The Early Start Programme was not in place when the IEA Preprimary Project commenced data collection.

Cycle Scheme in 1996[7]. This scheme, which is a five year pilot, refined the earlier scheme by including in the criteria for designation, factors such as the level of unemployment, the education levels of parents and the number of one-parent households. A distinction was also made between small rural schools (less than five teachers) and large urban schools, with factors relating to farm incomes being included for the assessment of rural schools. Thirty-two primary schools were included in the Urban Breaking the Cycle pilot project and 122 primary schools were included in the Rural Breaking the Cycle pilot project. There have been no alterations to the list of participating schools since its inception apart from one case where two schools amalgamated and one withdrawal from the Rural pilot project. This pilot project provides for additional capitation and cash grants for special projects in addition to improved pupil teacher ratios of 15:1 in Junior Classes i.e. Junior Infants/Reception class to 2nd Class (4 to 8 year-olds). The Education Research Centre, St. Patrick's College of Education, has been commissioned by the Department of Education to undertake an evaluation of the project which assesses the impact of the project on participating schools. The final report of this evaluation is due to be published by the end of 2001.

Home School Community Liaison Scheme

The *Home School Community Liaison (HSCL) Scheme* originally set up as a pilot scheme in 1990 in a number of designated disadvantaged schools developed steadily during the 1990's. This scheme provides for a co-ordinator/teacher to liaise with parents and the community outside the school. The scheme stemmed from an identified need for schools to adopt a more proactive role in promoting home-school relationships. The scheme had a number of aims including: the increase in variety and quantity of home-school contacts; improving the quality of contacts; promoting a more central and active role among parents in their children's education (Ryan, 1994). By 1998, the scheme had been mainstreamed within the designated disadvantaged sector and 225 out of 318 designated disadvantaged schools had been appointed a HSCL co-ordinator.

Support Teacher Project

There have been other smaller scale initiatives of note in the 1990's. For example, in September 1995, the Department of Education sanctioned approximately 30 teacher-counsellors in the Dublin area to support schools with a cohort of children with behavioural/emotional problems. This pilot project, which has been re-titled the *Support Teacher Project* was expanded to include designated disadvantaged schools outside the Dublin area. By 1998, 40 support teachers had been appointed and a number of schools which were not designated as disadvantaged were also included. According to Boldt et al. (1998), the aim was to address the social and emotional problems of selected pupils by the creation of a safe place in a school where children can relax, be creative, choose their activity and mix with others in a non-competitive way.

The years between Ireland's initial involvement with the IEA Preprimary Project and the completion of Phase 3 of the project also coincide with an increase in involvement by local community agencies in the promotion of educational and social interests of children. To a large extent, this has been facilitated by local Partnerships under the management of Area Development Management Limited (ADM)[8] and supported by the European Union Operational Programme for Local Urban and Rural Development 1994-99. Among the many projects and initiatives which have developed in this period which aim to increase the retention rates within formal education system and to reduce the levels of educational underachievement and early school leaving are the following:

- After School projects which provide opportunities for potential early school leavers to develop social, interpersonal and communication skills;
- Homework clubs which enable potential early school leavers to develop study skills and to complete their homework in a supervised and supportive environment;
- Parenting initiatives which involve parents becoming more actively engaged in the education of their children, and parents being provided with opportunities to further their own education (ADM, 1999).

[7]The Breaking the Cycle Scheme had not been established when the IEA Preprimary Project sample was selected in 1994. However, when the children were revisited in 1997/98, a number of the sample were attending schools which had become part of either the Rural or Urban Breaking the Cycle Scheme (see Chapter 3).

[8]Area Development Management limited (ADM) is an intermediary company established in 1992 by the Irish Government in agreement with the European Commission. The main role of ADM is to support integrated social and economic development through managing Programmes targeted at countering disadvantage and exclusion and promoting reconciliation and equality (ADM, 1999).

2.6 New Initiatives in Information and Communications Technologies in Education

One further initiative in Irish education was the investment in information and communications technologies (ICTS) through the *Schools IT2000* initiative. This three year project, which began in 1998 was in response to the fact that Ireland lagged significantly behind its European partners in the integration of ICTs into first and second level education.

The project involves three elements:

- classroom resources and infrastructure
- teacher skills development and support
- policy and research

and is co-ordinated by the National Centre for Technology in Education (NCTE) which was established for the purposes of this project.

The DES has provided a total of £131 million to the project. This has been supplemented by funding and support from the industrial and commercial sectors (National Centre for Technology in Education, 2000).

2.7 Summary

This chapter has outlined the changing economic and social context for the sample children's lives over the course of their participation in the IEA Preprimary Project. In 1994/95 when they were 4 years old, Ireland was still a slightly depressed economy with relatively high levels of unemployment. By 1997/98, unemployment levels were falling and the Irish economy was fast becoming a 'celtic tiger' economy. However, despite the improving economic situation, child poverty remains a concern. It is of note that the majority of schemes and programmes established by the Government to combat educational disadvantage apply to the designated disadvantaged sector only and are pilot in nature. The publication of the *National Children's Strategy* in 2000 reflects a growing interest in children's lives at a policy level, a development which had gathered momentum during the 1990's.

Chapter 3

Methodology

Methodology

This chapter provides an overview of the project methodology. Topics addressed include the tracking process of the original sample, the pilot study, data collector training, reliability and validity, and data collection procedures. Details on all the measurement instruments used are also provided.

3.1 Selecting and tracking the sample

In total 374 children (193 boys and 181 girls) and 249 teachers in 194 settings participated in Phase 3 of the study. The Phase 3 sample children attended primary schools in 23 counties of the Republic of Ireland. Thirty five per cent of the sample were in Dublin City and County reflecting the distribution trends of the population in general. Table 3.1 presents the numbers of children attending schools in each of the counties represented.

Table 3.1 Counties where sample children attended primary school

County	No. of Children
Dublin	130
Cork	57
Louth	22
Mayo	18
Wicklow	16
Donegal	13
Kerry	13
Wexford	13
Waterford	12
Galway	10
Kildare	10
Limerick	9
Tipperary	8
Clare	7
Leitrim	4
Monaghan	4
Cavan	3
Kilkenny	3
Laois	3
Longford	3
Sligo	3
Offaly	2
Westmeath	1

One of the focuses of Phase 2 of the IEA Preprimary Project in Ireland had been to describe the experiences of 4 year-old children attending preschools and those attending Junior Infant classes in primary schools. In addition, the Irish project described the experiences of young children considered to be at risk of educational disadvantage and peers who were not so disadvantaged. At Phase 2, therefore, the project was designed so that half the sample were attending designated disadvantaged preschools or primary schools, and half the sample were attending non-designated disadvantaged preschools or primary schools.

The first task, in preparation for Phase 3 data collection, was to locate the 396 children who had been observed in preschools and Junior Infant classes in primary schools between 1994 and 1995. This was achieved by contacting the Phase 2 settings (109 in total) to ascertain which primary school the children were attending in the school year 1996/1997. If a particular setting did not have this information, the child's parents were contacted directly.

One of the strategies used to keep in contact with the sample between Phase 2 and Phase 3 was to send Christmas cards to all the children in the Phase 2 sample. The initial large representative sample at Phase 2, and the extensive tracking efforts maximised the possibility that the Phase 3 sample, though possibly smaller in size, would be equally representative of the settings where Irish 7 year-olds spend their time.

The Project team succeeded in tracing all but three of the original 396 children. However, of the remaining 393, five children had emigrated and therefore were no longer eligible to take part. Once the children had been traced, the project team then formally sought the permission of both the school and parents to proceed with data collection. In fourteen cases, either parents or schools declined to take part. Thus, a follow-up rate of 94 per cent between Phase 2 and Phase 3 was achieved. Of the 22 children, who were unable to be met at Phase 3, 13 had been in DD settings at age 4 and 9 had been in NDD settings at age 4.

Three years later, on completion of the tracking of the same group of children the breakdown of schools was as follows: 175 children were attending DD[1] schools and 199 were attending NDD schools. Three of the NDD schools were fee-paying private schools.

The number of sample children attending each participating school ranged from one to six. Table 3.2 presents the breakdown according to school type.

[1] Five of the DD schools were also participating in the 'Breaking the Cycle' Scheme. Three of the schools categorised as DD are rural schools who joined the Rural Breaking the Cycle Pilot Project in 1996. These schools are not included in the DES Disadvantaged Areas Scheme but for the purposes of the IEA Preprimary Study are categorised as Designated Disadvantaged.

Table 3.2 Sample		
	No. of Settings	**No. of Children**
DD Schools	79	175
NDD Schools	115	199
TOTAL	**194**	**374**

The sample children attended both single sex ("all boys" or "all girls") schools and "mixed schools". The majority of participating schools were mixed schools (131 schools out of a total of 194). Sixty nine per cent of the children attending DD settings were in mixed schools, whilst 66 per cent of the children in NDD schools were in mixed schools. Overall, 36 per cent of the boys in the sample were in single sex schools, while 29 per cent of the sample girls were in single sex schools. Table 3.3 presents the sample breakdown between single sex and mixed schools.

Table 3.3 Number of children attending mixed and single sex schools			
	DD Schools	**NDD Schools**	**Total**
Mixed Schools	121	131	252
All Boys Schools	31	38	69
All Girls Schools	23	30	53
TOTAL	**175**	**199**	**374**

One of the aims of the IEA Preprimary Project both nationally and internationally had been to establish the relationship between the experiences of 4 year-olds in early education settings and their developmental status at age 7. Interestingly, when the tracking between Phase 2 and Phase 3 in Ireland was analysed on a child by child basis, it emerged that not all children who were attending DD settings at 7 years had been in DD settings at 4 years. Similarly, not all children who were attending NDD settings at 7 had been attending NDD settings at 4 years. For example, of the 175 children in DD settings at 7 years, 143 (81%) had been in DD settings at 4 years and of the 199 children in NDD settings at 7 years, 150 (75%) had been in NDD settings at 4 years. See Figure 3.1 for detailed tracking analysis.

3.2 Instrument development phase

The six measurement instruments developed for Phase 3 comprised two questionnaires and four child developmental status measures. These instruments were designed by the National Research Co-ordinators (NRCs) which included the Irish NRC, under the direction of the International Co-ordinating Committee (ICC) of the IEA Preprimary Project. NRCs submitted tests or instruments used in their country and from this large set of items, the NRCs selected the items for specific instruments. After the items were judged to be culturally appropriate by all NRCs, the ICC prepared the measure and distributed it to all NRCs for pilot testing in each participating country.

In Ireland, the pilot study was carried out in two schools in Dublin. The first (School A) was a designated disadvantaged school situated in Dublin's inner city: the second school (School B) was a non-designated disadvantaged primary school situated in a south-side suburb of the city. The pilot sample was drawn from 25 first and second class children in School A and 37 first and second class children in School B. The pilot study was undertaken in both 1st and 2nd classes because 7 year-olds may be in either grade level depending on age at school entry. The first ten children in each school who returned parental permission forms were selected for interview.

The principal issue which emerged during the pilot study was that the Irish children had difficulty understanding a number of American English words used. For example the word 'recess' had to be changed to 'breaktime' and 'lather' had to be changed to 'soap'. Only a small number of such alterations were necessary.

Following the analysis of the pilot-test results and the compilation of recommendations for revisions or deletions by the ICC, final versions of measures were sent to all NRCs.

3.3 Measurement instruments

Phase 3 involved the administration of the following instruments:

- Family Background Interview
- Teacher Interview
- Child Development Status Measurements
- Cognitive Development Status Measure
- Language Development Status Measure
- Social/Emotional Status Measure
- Academic Status Measure

3.3.1 Family Background Interview

Data collectors made appointments to interview a parent or guardian of each sample child. The majority of these interviews, which lasted approximately 20 minutes, took place in the school. When this was not possible, where for example a parent was working, data collectors either visited the parent in the child's home or conducted the interview over the phone. This occurred in 7 per cent of cases.

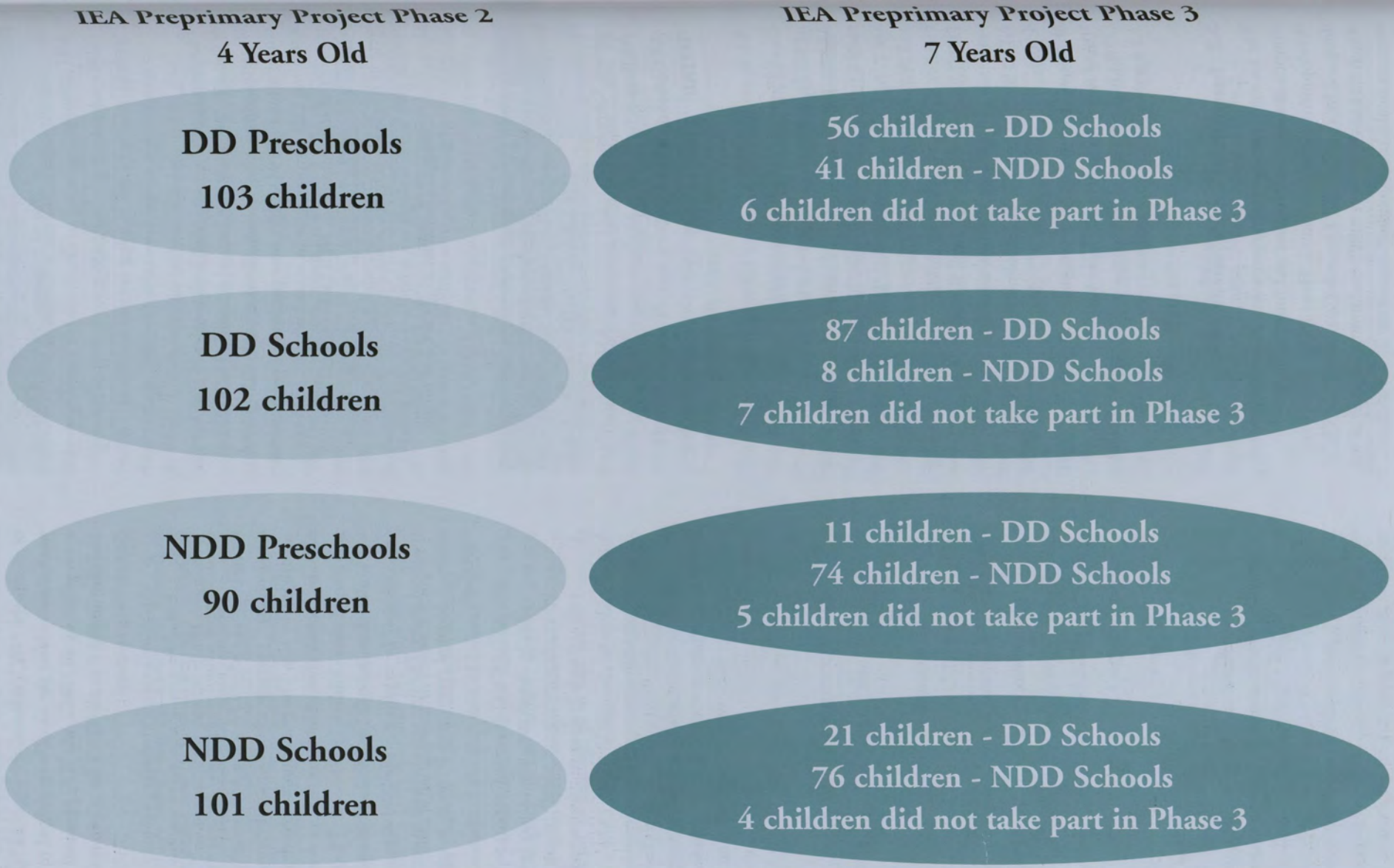


Figure 3.1 Tracing of children between Phase 2 and Phase 3

The purpose of the family background interview was to document changes in family and child characteristics since age 4. It included questions about significant changes in the child's physical health and emotional health and care and education experiences between ages 4 and 7. Parents were also asked about their education and occupation, amount and sources of income. The interview also included questions about parents' aspirations and educational expectations for the child and parent's evaluations of child's preprimary care and education settings and experiences and finally, as with teachers, parents were asked to rate their child's developmental status.

3.3.2 Teacher interview

The teacher interview was administered to the class teacher of each of the sample children. It contained questions about the teacher training and education, teaching experience, the teacher/child ratio, and the daily/weekly schedule (timetable) of subjects and activities.

Teachers were also asked to complete two rating scales of the sample children's socio-emotional development. Items were adapted from The Pictorial Scales of Perceived Competence and Social Acceptance Scales for Young Children, (University of Denver, U.S, 1983) which measured academic achievement and relationships with friends. Here teachers used a 4-point scale to rate children on 9 items. The second scale comprised items adapted from the Pupil Behaviour Inventory (Ann Arbor, M.I. Campus Publishers, 1966), and the Ypsilanti Rating Scale, (HighScope) which measured classroom conduct, academic motivation and academic potential. Teachers used a 4-point scale to rate children on 20 items such as initiative, interest in school work, disruptiveness, predicted academic success and emotional adjustment.

3.3.3 Child development status measurements

Assessments of children's developmental status at age seven were administered in 4 areas:

Cognitive Development Status Measure assessed the children's knowledge and skills in such areas as spatial relations, quantity, time, memory and problem solving.

Language Development Status Measure assessed the children's expressive and receptive language development.

Social/Emotional Status Measure assessed the children's affective development at age 7 from the perspective of both the child and the adult. Areas covered included relationships with adults and peers, motivation to learn, self-esteem and locus of control.

Academic Status Measure was divided into 3 sections: mathematics, reading comprehension and science. The mathematics measure assessed the children's skills in areas such as addition, subtraction, word problems, and interpretation of graphs and tables. The reading comprehension assessment comprised picture comprehension, sentence comprehension, and story comprehension (both listening and reading). The science measures assessed the children's knowledge and skills in areas such as temperature, the planets and estimation.

Examples of items from each of the measures are presented in Chapter 6. Full references for the measures used are contained in Appendix 2.

3.4 Training the data collectors

The minimum requirement for data collectors was an undergraduate qualification in a relevant discipline. Data collectors were recruited through the psychology, education and sociology departments of universities during February and March 1997. Data collectors were also recruited through an advertisement placed in *Tuarascáil* (now *In Touch*), the journal of primary school teachers in Ireland published by the INTO. Prior to data collection all data collectors had attended a one-day Training Seminar. In all, 46 data collectors were trained, 44 of whom actually went on to work on the project. Of this group 70 per cent were undertaking postgraduate study and 25 per cent were primary school teachers on career break or in retirement. The remaining data collectors were employed from within the Dublin Institute of Technology.

In total, the project team organised four training seminars, three in Dublin and one in Cork. The training seminar was organised as follows:

1. *Introduction to the IEA Preprimary Project.*
   Preliminary background material had been sent to the data collectors in advance of the training. During the first part of the training seminar, the project co-ordinator made a short presentation about the aims and the methodology of the project
2. *Guided exploration of the instruments.*
   Each data collector was given a pack, which contained a master copy of all four developmental assessments and two questionnaires as well as data collector guidelines. These were presented in detail by the project co-ordinator during the session. The pack also included the materials and equipment necessary for the mathematics assessment.
3. *Interview techniques and assessment procedures*
   Using a training video and data collector guidelines supplied by the ICC, data collectors had the opportunity to view a selection of items from each instrument being administered. Data collectors then practised in groups of two.

4. Administration

The focus of the next part of the training seminar was the practical arrangements necessary in undertaking data collection e.g. data collectors were given instructions about making contact with school principals, arranging appointments with parents, as well as payment of data collectors.

5. Matching data collectors to schools.

Data collectors were assigned a certain number of sample children depending on the data collector's availability and location. All school principals involved had been contacted in advance by the Irish project co-ordinator and were informed that they would be contacted directly by data collectors.

3.5 Monitoring data collection

The project co-ordinator acted as a liaison between data collector and schools. The role of the project co-ordinator was also to supervise the work of the data collectors while at the same time offering support and advice. Thus there was frequent contact between the co-ordinating centre in DIT and data collectors by telephone, fax and email during the data collection period. As soon as a data collector completed one set of data this was returned to the project co-ordinator for checking.

3.6 Reliability and validity

Based on the feedback from the pilot tests, the ICC prepared detailed procedures for administering and scoring the child assessments and adult interviews. During training, considerable time was spent in explaining and reinforcing these procedures and all data collectors were supplied with the guidelines issued by the ICC. The importance of consistency of administration procedures was emphasised at all stages.

All the measures used have been through rigorous instrument development analyses. Thus there is already considerable evidence of their face and predictive validity.

3.7 Data Collection

The project co-ordinator and the team of data collectors collected data between March 1997 and September 1998. Each data collector visited a setting for a minimum of one day if there was one target child in attendance, and a minimum of two full school days if there were two target children in attendance etc. The developmental status measures were administered to each sample child individually and in three to four periods of approximately 30 minutes each. Each target child was withdrawn from their classroom to a quiet work area while the measures were being administered. In a small number of cases (four), the data collector administered the developmental status measures in the child's home.

Class teachers were interviewed by the data collector in the school setting. If this was not feasible, teachers completed the questionnaires in their own time and returned completed questionnaires to the data collector.

3.8 Data Checking and Coding

Once a set of data (i.e. data from one school) was complete, it was forwarded to the co-ordinating centre at the DIT for checking and coding. All the data was then entered on computers for national analysis and copies of the complete data set was sent to High/Scope for inclusion in the international set of data for comparative analysis. Data was analysed using the SPSS (Version 9.0) computer package.

The findings are presented in Chapters 4 to 6, which follow. Details of the particular analyses used are contained in the relevant chapters.

Chapter 4

Children & Their Families

Children & Their Families

4.1 Introduction

As discussed in Chapter 1, the period 1994 to 1998 brought rapid change at an economic and social level to Ireland. In Phase 3, we were interested in examining how the Project families had fared since we had last interviewed them in 1994-1995. Were there major changes in their circumstances which had affected them and the lives of their now 7 year-old children? How had family factors affected the educational progress of the children? Before presenting the family background data collected between 1997 and 1998, we review some of the international and national research in the area. The chapter concludes with a discussion.

4.2 Literature review

4.2.1 Review of Phase 2 findings

The centrality of the family in the lives and development of children was discussed in the 1997 Report of IEA Preprimary Project (Hayes, O'Flaherty & Kernan, 1997). In reviewing the research on the impact of families on developmental outcomes, two related issues were highlighted: firstly, the relationship between structural variables such as household composition, parental educational level and employment status and developmental status and secondly, interlinked with structural factors, was the relationship between home processes such as how time and space are organised and used, how parents and children interact and parental expectations and developmental outcomes (Rutter, 1985; Bronfenbrenner, 1986; Kellaghan, Sloane, Alvarez and Bloom, 1993).

In 1997, Hayes et al. summarised the literature by stating that the cumulative effect of certain family background factors would seem to place a child at greater risk of low development status and later low school achievement. Such factors included being poor, being part of a lone parent family, being part of a large family, poor health, and parental unemployment. The results of the Phase 2 family background data indicated a level of vulnerability among certain subsets of the sample i.e. those attending designated disadvantaged (DD) settings particularly those in DD preschool settings.

4.2.2 Changing families

Internationally, the most prominent recent trends in relation to families include the increase of women in the workforce, delayed childbearing, increased demand for childcare, family breakdown and lone parenting (largely female headed families) (Gottfried, Balthurst & Gottfried, 1994). In Ireland, as elsewhere, the percentage of children being raised in traditional families (i.e. two-parent family in which the father is the sole economic provider and the mother is the primary caretaker) is decreasing. Recent research and policy development is increasingly taking account of the diversity of family types, socio-cultural expectations and how they influence family processes (Lamb, 1997). Researchers are also beginning to be more cautious of generalising their findings to all families, realising that contextual factors must be taken into account when looking at children's development (Bronfenbrenner, 1986; Garbarino, 1993; Woodhead, 1996; Peterson & Paulson, 1997). Furthermore, as Drew (1998) asserts, we find only a 'snapshot' picture at any one time, given the fact that during any person's life span they may move from, and return to, 'conventional' family forms.

4.2.3 Socio-economic disadvantage and child development

Much of the focus on research into children in the last 20 to 30 years, particularly in the US, has focused on the links between socio-economic disadvantage, poverty and child development. Children face different opportunities and risks for development (Garbarino, 1993). Opportunities can be viewed as relationships in which children find material, emotional and social encouragement compatible with their needs and capacities as they exist at a specific point in their developing lives. Regarding risks, in most industrialised western societies, economic issues play a large role in the dynamics of early risk. According to Garbarino (1992), the greatest risks come when families lack the financial resources to purchase support services in the marketplace and are cut off from informal helping relationships. Garbarino (1992), in citing research from Sameroff et al. (1987) points out that the effects of risk factors are not simply additive. This research showed that average IQ for 5 year-old children with 0, 1 or 2 risk factors present was above 115. However, with the addition of a 3rd and 4th risk factor, the average IQ dropped to nearly 85.

Whilst it is generally accepted that poverty means that children are at risk, the effects of economic deprivation are not at all well understood. Duncan, Brooks-Gunn and Klebanov (1994) have identified a number of reasons

for this. They point out that past studies linking economic deprivation and child development have not generally incorporated careful measurement of economic deprivation. A further factor that they identify as being often neglected, is the temporal dimension to poverty i.e. whether poverty is persistent or transitory, or whether poverty is experienced during infancy, early childhood or adolescence. A third factor identified by Duncan et al. is the ecological dimension that needs to be taken into account when considering the effects of poverty and economic disadvantage; examples include: how a household income is actually distributed among family members, how it is spent and the extent of help, both actual and potential, available from family members living elsewhere. Other ecological factors outside the immediate family include the neighbourhood in which the family resides, childcare settings, schools and peer groups (Duncan et al. 1994).

In the latter half of the 1990's, a broad set of official indicators of child well-being was developed in the United States. According to Nolan (2000), the process of developing these indicators began with an intensive examination of the data available on a regular basis across the areas of health, education, economic security, the family and neighbourhood, and child development. Beginning in 1997, the US federal government has produced annual reports titled *"America's Children: Key Indicators of Well-Being"*. The indicators included are set out under the broad headings of economic security; health; behavioural and social environment; and education.

According to Bronfenbrenner (1986), the unravelling of the socio-economic factor in studies of human development has involved the analysis of families' occupational status, parents education and family income. Parental education provides an index of social background separately for each parent, that is unlikely to be influenced by subsequent family processes. Furthermore, parental education appears to be an important source for parents' conceptions of the nature and capacities both of the child and of the parents at successive stages of a child's life.

In the US, where much of the larger scale longitudinal studies examining child development have been conducted, income has been shown to be one of the more powerful correlates of child outcomes. There are a number of reasons for this. In the US, the resources and services required for sustaining health and well-being of family members and furthering the development of children are highly dependent on a family's financial resources. As Garbarino (1992) states, "children cost too much when their caregivers cannot generate enough income to meet expectations for participating in the monetarised economy of day to day life" (p. 231). This may also be a trend in Ireland in the booming economy of the later years of 1990's as much of our economic policy mirrors the US rather than Europe. In comparative studies on child poverty carried out by OECD, and more recently by UNICEF (Micklewright & Stewart, 2000), Ireland has been shown to have high rates of relative child poverty when compared to other western industrialised nations.

Given the fact that there is so much variability within economic groups, much of the focus in more recent research into poverty and resilience has been on identifying the variables predicting successful or problematic development within groups of economically disadvantaged children (see for example the *Child Development* special issue on Children and Poverty, 1994). Indeed this has led to a debate around the validity of using a behavioural genetic approach which espouses the view that poverty itself, the environments provided by parents, and children's developmental outcomes are influenced by genetic factors (Rowe & Rodgers, 1997). This view has been rejected by Huston, McLoyd and Garcia Coll (1997) who would argue that parents' poverty or affluence is due in part to individual abilities and personality characteristics, "but is also a function of economic and social structural conditions as well as opportunity structures available to them as a function of their race, ethnic group, and gender" (p.390). For example, McLoyd (1998) in a separate paper concludes that the link between socio-economic disadvantage and children's socio-emotional functioning appears mediated partly by harsh, inconsistent parenting and partly by elevated exposure to acute and chronic stressors which are usually external to the family system. Similarly, Duncan et al.'s (1994) study of the effects of economic deprivation on cognitive development and behaviour at age 5 finds that the association between income and developmental outcomes appears to be mediated by maternal characteristics and behaviours. Using data from the Infant Health and Development Program, the results of their study reveal that the learning environment of the home mediates the relation between income and IQ, whereas maternal depression and coping mediate children's behaviour problems.

In *A Window on Early Education*, reference was made to the resilient nature of young children in the face of hardship. A major cross-national research study which investigated the actions parents or other caregivers and children themselves take that promote resilience in children up to the age of 12 years has been published (Grotberg, 1995). In the introduction to the Report of the International Resilience Research Project, Grotberg defines resilience as "human capacity to face, overcome, and even be strengthened by experiences of adversity". She argues that the capacity for resilience is developed

and nurtured from (1) factors of external supports and resources, for example trusting relationships; access to health, education; welfare and security services; emotional support outside the family; structure and rules at home; parental encouragement of autonomy; stable school environment; stable home environment, (2) inner personal strengths, for example a sense of being lovable; autonomy; appealing temperament; achievement oriented; self-esteem and (3) social, interpersonal skills, for example persistence; creativity; impulse control; seeking trusting relationships.

Data from the U.S. Parent-Child study, a 22-year study of high-risk children, would seem to support Grotberg's thesis. This study found that a secure attachment in infancy, along with good quality parenting, particularly emotionally responsive care-giving and good quality parent-child relationship in the toddler and preschool period serve as major protective factors against the negative effects of various childhood adversities (Egeland, 1997).

4.2.4 Maternal employment and dual-earner households

As stated in the introductory paragraphs of this chapter, one of the trends in family change in recent years has been the increased participation of women of young children in the workforce, and the increase in the number of dual-earner households (see also Chapter 2). Researchers who have reviewed the literature on the effects of maternal employment on children's development and school achievement have agreed that there is little evidence of negative effects when children are older (Gottfried & Gottfried, 1994; Harvey, 1999).

In Section 4.2.3 reference was made to high levels of child poverty in the United States. If we were to look at the countries with the lowest levels of child poverty, namely Luxembourg, Norway, Denmark and Sweden, the common denominators across these nations are high levels of female participation in the workforce, combined with family friendly policies in the workplace and high expenditure on benefits and supports (Nolan, 2000). It can be argued that through such policy approaches, these countries have succeeded in preventing most of the poverty risk of children in all family types (Forssen, 2000).

Two separate studies (Gottfried & Gottfried 1994 and Peterson & Paulson, 1997) analyse the impact of maternal employment in terms of family adaptation arguing that maternal employment is a family issue and not just a women's issue. These studies would seem to reflect a move away from analysing the detriment or otherwise caused by maternal employment to focusing on understanding the complex processes that operate between parental employment, home environment and children's development.

Gottfried and Gottfried's (1994) longitudinal study demonstrated that both mothers' and fathers' occupational status were positively related to the children's intellectual and academic performance and motivation, to intellectually stimulating aspects of the home environment, and to parental aspirations for their children's achievement. The same study also found fathers spent more time with their children when the mothers were employed and as the mothers' work hours increased.

Peterson and Paulson's research (1997) explores how 5th and 6th grade (10 and 11 year olds) students' perceptions of parenting, teaching, and school differ according to whether their mothers were in paid employment. The study used path models to assess the mediating influences of students' perceptions of their own competence and motivations. In general the differences between the two groups was small. Amongst their findings were the following: students with non-employed mothers had higher self-competence when their parents displayed higher values about achievement, whereas students with employed mothers had higher self-competence when their parents were directly involved in school, supporting the contention that students make role adjustments in response to their mothers' employment status. Specifically, students whose mothers are employed do not perceive their parents to be as involved in their activities because the parents do not have the time. These students, therefore, are more responsive to direct evidence of their parents' involvement and their self-competence would be influenced positively by perceptions of parental interest in their school activities (Peterson & Paulson, 1997). Thus, in discussing the impact of parental involvement on children's development, it would seem that it is not only active and participatory involvement of parents in their child's education that is important, but also the level of parents' interest in their child's work and experience at school (see also Section 5.2.6).

4.2.5 Summary

In this review we have discussed a range of factors in social and familial contexts that affect children's development and school achievement. Particular areas highlighted include how socio-economic disadvantage affect child development and the impact of maternal employment and dual earner households on families and children's development.

The most recent study on child poverty, Nolan's *Child Poverty in Ireland* (2000) states that the underlying factors explaining the high child poverty rates, despite the reduction in overall unemployment rates at the end of the 1990's, is the relatively high frequency of large families and lone parents, and the high proportion of households with children with no-one in employment (Nolan, 2000).

In the following section we present an analysis of the family background data collected from participating families in the IEA Preprimary Project between 1997 and 1998.

4.3 Findings

Three hundred and sixty one parents agreed to be interviewed as part of the study. This represented 97 per cent of participating families. In most cases the child's mother came forward to be interviewed (89 per cent). Ten per cent of the interviewees were fathers and in a small number of cases 'other relations' agreed to be interviewed where either parent was not available.

Firstly, parents were asked a number of questions about their child's early childhood care and education experience in order to clarify information which had been supplied during Phase 2.

In attempting to capture the effects of family background, the following issues were also addressed in the Family Background Questionnaire: change in health status of child since age 4 years; change in structure of the family since age 4; parent's rating of quality of children's education; expectations of children's education future; parent's education and occupational status and income. Parents were also asked to rate the social and emotional development of their children (This data is presented in Chapter 6).

The findings therefore are organised under the following broad headings:

- early childhood care and education experiences
- age children began primary school
- significant life events between 4 and 7 years
- parents' ratings of quality of care between 4 and 7 years
- parents' expectations
- family structure
- parents' education experience
- parents' employment status
- family income.

4.3.1 Early childhood care and education experiences

Ninety per cent of the sample of children had attended some form of early childhood care and education service before beginning primary school. The mean length of time spent in such service(s) was 17 months. Caution is advised in interpreting this figure, as the period identified by parents may or may not have included holiday periods. The most common period identified was one year (107 cases) followed by 2 years (53 cases).

Of those children presently in Designated Disadvantaged (DD) schools, 85.5 per cent had attended some form of early childhood care and education service before starting primary school, while 92.9 per cent of children presently in Non Designated Disadvantaged (NDD) schools had attended some form of early childhood care and education service.

Parents were also asked to identify the type of early childhood care and education service availed of by their children. The majority of children (75.1 per cent) had attended some form of sessional or playgroup service, while 10.8 per cent of children had availed of a combination of services such as a childminding arrangement and sessional care (see Table 4.1). The percentage availing of sessional services show an increase of approximately 10 per cent compared to the finding of Hennessy and Hayes (1997) in their survey of early childhood services in Ireland in 1994/95.

Table 4.1 Percentage of children attending different forms of Early Childhood Care and Education (ECCE) services before starting primary school

Type of Service	Children in DD Schools (% who had attended ECCE services	Children in NDD Schools (% who had attended ECCE services	Total (% of all children who had attended ECCE services
Childminder	0	0.5	0.3
Sessional	72.7	77	75.1
Crèche	5.5	1.5	3.3
Combination of above	7.3	13.8	10.8
N/A (did not attend pre-school)	14.5	7.1	10.5

4.3.2 Age children began primary school

Parents were asked what age their child was when he/she started primary school. Overall, the mean age was 4 years 7 months. Children in DD schools were on average 2 months younger starting primary school than their counterparts in NDD schools.

Table 4.2 Children's ages on starting primary school			
	DD Schools (N=196) (age in months)	NDD Schools (N=164) (age in months)	All (N=360) (age in months)
Mean	54.3	56.0	55.2
Median	54.0	57.0	55.0
S.D.	5.13	4.52	4.88
Minimum	48	46	48
Maximum	69	69	69

4.3.3 Significant changes between 4 and 7 years

Health status

The researchers gathered data on changes in the sample children's lives since they had last been interviewed at age 4. Parents were asked whether there had been any significant changes in the health status of their child since age 4. As examples of possible changes, the following prompts were used: an accident, serious illness, or injury. Overall, 88.4 per cent of parents replied that there had been no change in the health status of their child between 4 and 7 years. On examining the breakdown between DD and NDD schools, it is evident that parents of children attending NDD schools report marginally more incidents of significant changes in health status than parents of children attending DD settings (12.2 per cent compared to 10.9 per cent) (see Table 4.3).

Table 4.3 Percentage of parents reporting significant change in health status of their children between 4 and 7 years			
	DD Schools (N=165)	NDD Schools (N=196)	All (N=361)
Yes	10.9% 18	12.2% 24	11.6% 42
No	89.1% 147	87.8% 172	88.4% 319

Although parents were not required to supply information regarding the health of their child, 27 of the 42 cases supplied more details. The most frequently identified illness/condition was asthma (9 cases), followed by hearing problems (5 cases). Other illnesses/conditions cited included leukemia, tonsillitis, migraine and coeliac.

Of those children who experienced a significant change in health status, 37.5 per cent of parents reported that this change had had an emotional effect on their child. This feeling was more prevalent among parents of children attending DD schools (53 per cent) than among parents of children in NDD schools (26 per cent).

Overall, at the time of interview, parents of 17 children (5 per cent) reported that their children were still affected by this significant health change.

Family structure

During the family interview parents were asked if there had been a significant change in the structure of the family since age 4. 'Change in family structure' was interpreted widely and included for example, death of a grandparent, a new baby in the family, parents separating or remarrying. Overall 44.6 per cent of parents replied 'yes' to this question. Looking separately at DD and NDD schools, 46.7 per cent of parents of children attending DD schools replied there had been a change in structure. The corresponding figure for parents of children attending NDD schools was 42.9 per cent.

As with health status, parents were not asked to provide specific details regarding family structure changes. However of those parents who supplied additional information, a new baby in the family was the most frequently cited change in family structure (38 cases). This was followed by death of a grandparent (24 cases) and separation of parents (13 cases). Other changes in family structure identified included: death of sibling (3 cases), death of parent (1 case).

Table 4.4 Number of cases of family structure changes			
	DD Schools	NDD Schools	All
New Baby	12	26	38
Death of Grandparent	11	13	24
Separation of Parents	7	6	13
Death of Sibling	3	0	3
Death of Parent	1	0	1

Parents who replied 'yes' to this question were then asked if this had affected their child emotionally. More parents of children attending DD schools than parents of children attending NDD schools reported 'yes' to this question (39.0 per cent and 30.1 per cent respectively). At the time of interview more parents from DD schools reported that their child was still affected emotionally by this change in family structure than parents in NDD settings.

Period of emotional upset

Parents were also asked if, since age 4, there had been a period of emotional upset for their child or if he/she experienced emotional problems (e.g. family moved/relocated). Twenty-nine per cent of parents of children attending DD schools replied in the affirmative whilst the figure for children attending NDD schools was 19.4 per cent (see Table 4.5).

Table 4.5 Percentage of parents reporting period of emotional upset for their children between 4 and 7 years

	DD Schools (N=165)	NDD Schools (N=195)	All (N=360)
Yes	28.5% 47	19.4% 38	23.5% 85
No	71.5% 118	80.1% 157	76.2% 275

Of those children who experienced a period of emotional upset, 34.7 per cent of parents of children attending DD schools said their child was still affected by this emotional upset. The corresponding figure for children in NDD settings was 23.7 per cent. Thirty-two parents provided additional information about the situations which they felt had caused emotional upset to their child. For example, one parent described how her child "*had been tormented by other children on the street*" where she lived and "*was a victim of bullying*". Another parent described how her child "*had suffered emotional abuse over the past few years which has had a definite impact on his school work and his emotional state*". Other examples included a child being a victim of a physical attack when playing in a friend's garden. One mother described how her child "*whinged*" and sometimes "*was withdrawn*". She felt this was due to family circumstances as she and her husband were about to separate.

4.3.4 Quality of care in school at 5 and 7 years

A *Window on Early Education in Ireland* provided insight into the sample children's experiences in preschool and school settings at aged 4 years and addressed the quality of experience provided for the children. Three years later parents were asked to rate the quality of their child's care in school at each of three subsequent school years between 5 and 7 years on a four point scale, (1 = minimal; 4 = excellent). Quality in this context was defined for parents in the following terms:

- whether parents felt they had enough communication with their child's teacher
- whether their child had a variety of experiences
- whether their child had the opportunity to experience new things
- whether their child seemed happy most of the time.

The majority of parents rated their child's care as being excellent. This finding was consistent across DD and NDD settings. The most recent experience (care in school at aged 7) was rated most highly (see Table 4.6 for complete breakdown of ratings at age 5 and 7 years).

Table 4.6 Parents' ratings of quality care in school at age 5 and 7 years

	DD Schools (N=160)		NDD Schools (N=192)	
	5 years	7 years	5 years	7 years
Minimal	2.5% 4	0.6% 1	4.2% 8	1.6% 3
Sufficient	4.4% 7	4.4% 7	5.7% 11	2.6% 5
Good	24.4% 39	20.0% 32	27.1% 52	21.4% 41
Excellent	68.8% 110	75.0% 120	63.0% 121	74.5% 143

4.3.5 Parents' expectations

One of the factors identified in the literature as being important when investigating the relationship between family and educational outcomes is parental expectations. The parents of the sample children were asked what level of education they would like their child to complete. They were also asked what level of education did they think their child would actually complete. The findings are presented in Tables 4.7 and 4.8.

Table 4.7 Parents' expectations regarding level of education they would like their child to complete

	DD Schools (N=165)	NDD Schools (N=196)
Complete Primary	1.2% 2	0% 0
Junior Certificate	0.6% 1	0.5% 1
Leaving Certificate	26.1% 43	9.7% 19
Some college/vocational	1.2% 2	0% 0
College Degree	69.7% 115	86.2% 169
Postgraduate Degree	0.6% 1	0% 0
DK/NR	0.6% 1	3.1% 6

DK/NR: Don't know/no response

Overall the majority of parents of children both in DD and NDD schools would like their child to complete 3rd level education. However, the highest level identified by 26.1 per cent of parents in DD schools is the Leaving Certificate whilst the corresponding figure for NDD Schools is 9.7 per cent.

Parents were less optimistic when they were asked about the level of education they thought their child would actually complete. Thirty-six per cent of parents of children attending DD schools felt that the highest level of education their child would complete would be Leaving Certificate level. A further 54.5 per cent felt they would complete a college degree. Seventeen percent of parents of children attending NDD schools felt that the highest level their child would complete would be Leaving Certificate, whilst a further 72.4 per cent felt they would complete a college degree.

Table 4.8 Parents' expectations regarding level of education they think their child will complete

	DD Schools (N=165)	NDD Schools (N=196)
Complete Primary	0.6% 1	0% 0
Junior Certificate	5.5% 9	1.0% 2
Leaving Certificate	35.8% 59	17.3% 34
Some College/vocational	0% 0	1.0% 2
College Degree	54.5% 90	72.4% 142
Postgraduate Degree	0% 0	0% 0
DK/NR	3.6% 6	8.2% 16

4.3.6 Mothers' marital status

Mothers were also asked a number of questions about their marital status. Overall, 89.4 per cent of mothers replied that they were currently married. Looking at the breakdown between mothers of children attending DD schools and NDD schools, fewer mothers in the former category were currently married (82.8 per cent compared to 94.9 per cent). Of those who replied that they were currently married, 92.5 per cent replied they were living with a spouse and 6.9 per cent were separated.

Table 4.9 Percentage of mothers who were currently married

	DD Schools (N=163)	NDD Schools (N=195)	All (N=358)
Currently Married	82.8% 135	94.9% 185	89.4% 320
Not Married	17.2% 28	5.1% 10	10.6% 38

Looking at the status of those who were not married at the time of interview the findings indicate that the majority had never married (29 mothers). Twenty-six of this group were mothers of children attending DD schools. Overall, five mothers replied that they were divorced[1] and three mothers overall replied that they were widowed. One mother declined to reply to this question (see Table 4.10). Thirty-five per cent of this group were living with a partner.

Table 4.10 Marital background of mothers who were not married at time of interview

	DD Schools	NDD Schools	All
Divorced	1	4	5
Widowed	2	1	3
Never Married	26	3	29
DK/NR	0	1	1
Total	29	9	38

4.3.7 Parent's education experience and employment status

Data on education and employment status is firstly presented with respect to mothers and then fathers.

Mother's education

As expected, the findings regarding the number of years of full-time education completed by the mothers of the sample children is more or less consistent with the findings of Hayes et al. (1997) with mothers of children in NDD schools on average remaining in full-time education for a period of 2 years over and above mothers of children in DD schools (13. 7 years compared to 11.4 years) (see Table 4.11).

Table 4.11 Number of years full-time education: mothers

	DD Schools (N=164)	NDD Schools (N=196)
Mean	11.4	13.7
Median	11	14
S.D.	2.45	2.61
Minimum	0	5
Maximum	18	21

[1] Divorce only became available in Ireland in February 1997 (see chapter 1).

Mothers were also asked to identify the highest educational level they had achieved. For 24.8 per cent of mothers of children in DD schools, the highest level achieved was primary education. The corresponding figure for mothers of children attending NDD schools was 7.1 per cent. More mothers of children in NDD schools than DD schools stated that Leaving Certificate was the highest level of education they had achieved (31.1 per cent and 17.0 per cent respectively). Three per cent of mothers of children in DD schools had achieved a third level qualification - the corresponding figure for mothers of children in NDD schools was 14.3 per cent.

Table 4.12 Highest education level achieved: mothers

	DD Schools (N=165)	NDD Schools (N=196)
Primary	24.8% 41	7.1% 14
Group/Inter Certificate	39.4% 65	21.4% 42
Leaving Certificate	17.0% 28	31.1% 61
Some College	8.5% 14	19.9% 39
Undergraduate Degree	3.0% 5	14.3% 28
Postgraduate Degree	0% 0	3.1% 6
Not definable by level	5.5% 9	2.6% 5

Mother's employment status

The employment rate of mothers had increased since they were last interviewed. When the sample children were aged four, 60 per cent of mothers were not in paid employment. Three years later this figure had been reduced to 49.3 per cent. This change reflects the workforce trends at a national level. Comparing mothers of children attending DD and NDD schools, we find that 44.5 per cent of the former replied 'yes' they were in paid employment, whilst the figures for the latter group was higher at 55.9 per cent.

The vast majority of mothers (94.5 per cent) who were in paid employment worked outside the home. Overall 77 per cent replied that their work was permanent and 17.3 per cent temporary. More mothers of children attending NDD schools were in permanent positions. Nine point three per cent of working mothers were self-employed and 6.6 per cent held more than one paid job.

Table 4.13 Mother's employment details

	DD Schools	NDD Schools	Total
In paid employment	44.5%	55.9%	50.7%
Work permanent	69.4%	81.3%	76.5%
Work temporary	23.6%	13.1%	17.3%
Self-employed	6.8%	11.0%	9.3%
Holds more than one job	5.5%	7.3%	6.6%

Further analysis of mother's employment was undertaken to establish occupational level[2]. Forty-two per cent of mothers of children attending NDD schools were working in either professional or managerial positions. The corresponding figures for mothers of children attending DD schools was 25 per cent. The majority of mothers in DD schools were in semi-skilled occupations. It is of note that 12.7 per cent of mothers of children attending NDD schools were categorised as working in unskilled employment whilst no mothers of children in DD schools fitted into this category.

Table 4.14 Mothers' occupational level

	DD Schools (N=72)	NDD Schools (N=110)
Professional/Managerial	25.0% 18	41.8% 46
Clerical/Sales	26.4% 19	27.3% 30
Semi-skilled	48.6% 35	18.2% 20
Unskilled	0% 0	12.7% 14

Of those mothers who were not in paid employment, 88 per cent (145 mothers) overall categorised themselves as being homemakers; 6 per cent (10 mothers) were unemployed; four mothers were on disability leave; two mothers were on a pension; one mother replied that she was a student and one, retired.

Overall, 23 per cent of this group replied that they were looking for paid employment. A higher proportion of mothers with children in DD schools were seeking paid employment (31.8 per cent) than mothers with children in NDD schools (13 per cent).

[2] Coders were guided by the 1996 Census classification of occupations (Central Statistics Office, 1998) when establishing occupational level.

Father's education

Figures regarding the number of years of education completed by fathers are also consistent with the Phase 2 findings. In common with mother's education, fathers of children in NDD schools on average remained in full-time education for a period of 2 years over and above fathers of children in DD schools. In both school categories, it is of note that mothers completed marginally more years of education than fathers overall.

Table 4.15 Number of years full-time education: fathers

	DD Schools (N=138)	NDD Schools (N=189)
Mean .	10.97	13.18
Median	11	13
S.D.	2.43	3.03
Minimum	1	8
Maximum	18	24

Looking at educational levels achieved by the fathers, 23 per cent of fathers of children attending NDD schools replied that the highest level achieved was Leaving Certificate. The corresponding figure for DD schools was 22 per cent. Eighty-eight per cent of fathers of children attending DD schools and 63 per cent of fathers of children in NDD schools had achieved a Leaving Certificate or lower qualification. One father of a child attending a DD school had achieved undergraduate college education, whilst the corresponding figure for fathers of children attending NDD schools was 22 or 11.6 per cent. However, overall more fathers than mothers had undertaken postgraduate college education – though this group was in a minority overall.

Table 4.16 Highest education level achieved: fathers

	DD Schools (N=139)	NDD Schools (N=193)
Primary	28.1% 39	10.0% 19
Group/Inter Certificate	38.1% 53	30.5% 58
Leaving Certificate	21.6% 30	22.6% 43
Some College	3.6% 5	12.1% 23
Undergraduate Degree	0.7% 1	11.6% 22
Postgraduate Degree	1.4% 2	7.4% 14
Not definable by level	6.5% 9	5.8% 11

Father's employment status and occupation level

Employment levels for the fathers of the sample children had also increased since they had been last interviewed during Phase 2. This was particularly the case for fathers of children attending NDD schools. Overall, 67 per cent of fathers of children attending DD schools and 91 per cent of fathers of children attending NDD schools replied that they were in paid employment. When their children were aged 4, three years previously, the corresponding figures were 63 per cent and 83 per cent respectively.

The majority of fathers replied that they were in permanent positions (91.5 per cent). Interestingly, there was no difference between fathers of children attending DD and NDD schools as had been the case for mothers. Overall, 25 per cent of fathers replied that they were self-employed and 8 per cent replied that they held more than one paid job (Table 4.17).

Table 4.17 Fathers' employment details

	DD Schools	NDD Schools	Total
In paid employment	67.1%	90.6%	80.7%
Work permanent	91.4%	91.5%	91.5%
Work temporary	6.5%	4.3%	5.1%
Self-employed	15.1%	29.7%	24.5%
Holds more than one job	9.5%	7.7%	8.3%

The breakdown in occupational level between fathers of children attending DD versus NDD schools was similar to the pattern evident with working mothers. The majority of NDD fathers were classed as being in professional or managerial employment (47.1 per cent) whilst the majority of DD fathers were classed as being in semi-skilled employment (see Table 4.17). As was the case with mothers, more fathers of children in NDD schools were categorised as working in unskilled occupations than fathers of children in DD schools.

Table 4.18 Fathers' occupational level

	DD Schools (N=88)	NDD Schools (N=170)
Professional/Managerial	28.4% 25	47.1% 80
Clerical/Sales	9.1% 8	4.1% 7
Semi-skilled	61.4% 54	35.3% 60
Unskilled	1.1% 1	13.5% 23

Of the 62 fathers who were not in paid employment, four categorised themselves as homemakers. Seventy-nine per cent of this group described themselves as being unemployed, five fathers (8.1%) were on disability leave, one on a pension and three described themselves as being retired. There were no full-time students among fathers.

Table 4.19 Percentage of dual earner families

	DD Schools (N=165)	NDD Schools (N=196)	All (N=361)
Dual Earner Family	26.7% 44	48.0% 94	38.2% 138

Overall, 38 per cent of children were in families where both parents were in paid employment. However, if one looks at the breakdown between NDD and DD schools, the findings indicate that this is more usual in families of children attending NDD schools.

4.3.8 Family income

The data collection experience at Phase 2 was that of reticence in disclosing information about levels and sources of income. At Phase 3, parents were given bands of income and were asked about their annual income from all sources. The findings indicate that the average income of families of children in DD settings was significantly lower than those attending NDD settings. Table 4.20 presents the geometric mean on reported annual incomes. Among families of children attending DD schools, the mean reported annual income was £12,000 and among families of children attending NDD Schools, it was £21,500.

Table 4.20 Annual family income

	DD Schools (N=146)	NDD Schools (N=158)
Geometric Mean	£12,000	£21,500
Minimum	£4,500	£6,000
Maximum	£40,000	£67,500

Parents were also asked about the source of their income. Overall, the majority replied that most of their household money came from their and/or their partner's work (72.6 per cent) whilst 20.8 per cent overall replied that their money came from welfare. Two families replied that their income came from pension or disability allowances and one family replied that most of their household money came from relatives.

4.4 Discussion

The majority of parents in both DD (89 per cent) and NDD (88 per cent) schools reported no significant health change in their children between 4 and 7 years. More parents in DD schools (47 per cent) reported changes in family structure (which included new baby, death in family, parents separating) than in NDD schools (43 per cent). Also, more parents in DD settings (29 per cent) than in NDD schools (19 per cent) reported periods of emotional upset for their child between 4 and 7 years.

One area where there were no significant differences between DD and NDD schools was participation in early childhood care and education before starting primary school (86 per cent DD school children, 93 per cent NDD school children). However, because half the original sample had been selected because they were attending preschool settings, caution is advised in interpreting this figure as representative of the national participation rates.

Children in DD schools were on average two months younger starting school than children in NDD schools. There are a number of possible explanations for this. Firstly, parents of children who attended DD schools may not have access to preschool services. Secondly, they may not value preschool education and preferred to enroll their children in primary school as soon as the school accepted them. Thirdly, the costs may have been a factor. Attendance at primary school is free, whereas preschool education generally has to be paid for by families. And finally, it may have been more convenient to send their child to school if he/she had older siblings attending.

Parents in both DD and NDD schools rated the quality of care received by their children in school very highly. This is consistent with other research which asks users/parents to rate services.

In the literature review family breakdown and single parenting was identified as an increasing trend both in Ireland and worldwide. The Phase 3 findings indicate that the majority of the sample children were in two parent families. For example, eighty-nine per cent of mothers were married and the majority (93 per cent) were living with their spouse. Five of the 358 parents who supplied information on marital status replied that they were divorced - four of these were in NDD schools. Most of those who were not married were families attending DD settings and fell into the category of never married. Thirty-five per cent of this group were living with a partner.

According to Bronfenbrenner (1986), parental education is an important source for parents' conceptions of the nature and capacities of the child at successive stages. While the majority of parents aspired to a 3rd level

education for their children, there was a difference across DD and NDD schools. Parents of children attending NDD schools had higher expectations for their children's educational achievement. For example, 86 per cent of the NDD parents would like their child to complete a 3rd level course - the corresponding figure for DD schools was 70 per cent. Parents of children attending NDD schools had remained in full-time education for a period of 2 years over and above parents of children attending DD schools.

The findings presented in this chapter indicate that there is some evidence to suggest that changing economic climate and employment opportunities in Ireland outlined in Chapter 2 have impacted on the participating families particularly as it has affected the working lives of parents. It could also be argued that the increased employment rates, particularly of mothers, could be explained by the fact that their now 7 year old children are at school for longer periods each day than they would have been three years previously when they were in pre-schools or Junior Infant classes. At Phase 2, 27 per cent of the fathers of the sample children were not in paid employment. By Phase 3, this had decreased to 19 per cent. However, when we examine the breakdown between DD and NDD settings, there is a difference of 24 per cent in fathers' employment rates between the two groups. Similarily, the numbers of mothers of sample children in the workforce increased by 11 per cent, from 40 per cent at Phase 2 to 51 per cent at Phase 3. These findings are reflected in the differential mean annual income levels between DD and NDD settings which were significantly different at £12,000 and £21,500 respectively. It is also of note that the percentage increase in income of families of children in DD schools between Phase 2 and Phase 3 was 9 per cent, whereas for families of children attending NDD schools - it was 32 per cent. Overall, a larger percentage of parents of children in NDD schools work and work in higher skilled jobs.

Keeping in mind, Nolan's (2000) assessment on risk for child poverty, it is of note that of the 21 per cent of families overall at Phase 3 who rely on welfare payments as their main source of income, 79 per cent of this group are in DD schools.

4.5 Summary

- Ninety per cent of the sample children had attended some form of early childhood care and education service before beginning primary school. The majority of these children (75 per cent) had availed of a sessional or playgroup type service.
- The mean primary school starting age amongst the sample was 4 yrs 7 mths. Children in DD schools were on average, 2 months younger starting school than children attending NDD schools.
- The majority of parents (88 per cent) reported no significant change in the health of their child between 4 and 7 years.
- Forty per cent of parents reported a significant change in family structure since they were last interviewed when their child was 4 years. This change in structure could have included birth of a new baby, death of a grandparent, separation of parents, or death of a sibling or parent.
- More parents of children attending DD schools (29 per cent) than children attending NDD schools (19 per cent) reported a period of emotional upset for the children between ages 4 and 7 years.
- The majority of parents rated the quality of their child's care in school as being excellent with the most recent/current experience rated most highly (75 per cent rated it as being 'excellent').
- Whilst 86 per cent of parents of children attending NDD schools and 70 per cent of parents of children attending DD schools would like their child to complete 3rd Level education, 72 per cent of NDD parents and 55 per cent of DD parents felt that their child would actually achieve this.
- Eighty-nine per cent of mothers interviewed were married at the time of interview. Seventeen per cent of mothers of children in DD schools and 5 per cent of mothers of children in NDD schools were not married.
- Mothers and fathers of children attending NDD schools had remained in full-time education for a period of 2 years over and above their counterparts in DD schools.
- Fifty-one per cent of mothers overall and 81 per cent of fathers were engaged in paid employment. Looking at the breakdown between DD and NDD schools, more parents of children in NDD schools (56 per cent, mothers; 91 per cent, fathers) were in paid employment than parents in DD schools (46 per cent, mothers; 67 per cent, fathers).
- Average family income was significantly lower in families of children attending DD schools (£12,000) than those attending NDD schools (£21,500).
- The percentage increase in income of families of children in DD schools between Phase 2 and Phase 3 was 9 per cent, whereas for families of children attending NDD schools - it was 32 per cent.

Chapter 5

School Experience of 7 year olds

School Experience of 7 year olds

5.1 Introduction

A central focus of the IEA Preprimary Project is to examine the complex interactions between the child, the family, the teacher and the environment at age 4 and at age 7. This chapter presents information on a variety of school and classroom features such as class size, time spent on different curricular areas, materials and resources available in the classroom, and how parents were involved in the daily life of the school. All these factors contributed to the school experience of the sample of children in the year they turned 7. The chapter begins with a review of the literature.

5.2 Literature review

5.2.1 Conceptualising curriculum in primary and preprimary education

Two issues which have been central in the current debate about early years' curriculum are the search for a satisfactory definition of curriculum in the context of early years (Hayes, 1999) and what is an appropriate curriculum for young children from birth to eight years (Blenkin & Kelly, 1996; Dahlberg, Moss & Pence, 1999). In 1994, the Start Right Report (Ball, 1994) defined the curriculum as follows:

> *...the curriculum includes all the activities and experiences (planned and unplanned; formal and informal; overt and hidden) from which a child learns. In its broadest form, the curriculum involves a consideration of the process of learning (how a child learns), the learning progression (when a child learns) and the learning context (where and why the children learns).*
>
> (Ball, 1994 p.103)

In examining the current debate on curriculum for young children (birth to 8 years), a number of issues and themes can be identified. Firstly, there has been a reappraisal of "child-centred" education (Singer, 1996; Anning, 1998) and a more critical look at the notion of "developmentally appropriate practice" (Blenkin & Kelly, 1996; Woodhead, 1996; Smith, 1999). These debates have been informed by consideration of Vygotskian socio-cultural theory in curricular development whereby the interactions amongst students and teachers are central to the curricular experience (Vygotsky, 1978).

Secondly, it is apparent that the language of emotion is also re-entering the curriculum to replace the language of business and industry which had characterised post mid 19th century education. Curriculum models are increasingly using words like well-being, confidence and self-esteem (Blenkin & Whitehead, 1996; Millar,1997). A further issue in curriculum for young children is an emphasis on developing an orientation to learning also characterised as "dispositions for learning". This is illustrated by Dweck and Leggett (1988) in their characterisation of "helpless" versus "mastery" oriented learners (see also Section 6.2).

These new conceptions of early years curriculum are evident in a number of recent curriculum models. Two are cited here. Firstly, the New Zealand *Te Whariki Curriculum* (1996) and secondly the *Quality in Diversity Project* based at Goldsmith College, London. The Te Whariki curriculum is based on the following four guiding principles: empowerment; holistic development; family and community relationships. The five strands of the curriculum which lead to children's behaviours are:

- Belonging – taking an interest;
- Well-being – being involved;
- Exploration – persisting with difficulty, challenge and uncertainty;
- Communication – expressing a point of view or feeling;
- Contribution – taking responsibility (Ministry of Education, 1996).

The Quality in Diversity Project has developed an agreed Framework for Early Learning based on similar principles:

- Belonging and connecting: emphasing relationships with children and adults in families, communities and group settings
- Being and becoming: effective learning builds upon self-respect, feelings of personal worth and identity.
- Doing and being active: effective learning builds upon what children have already achieved. The processes of learning are seen to be important
- Contributing and participating: Learning to be responsible and to make appropriate choices in a group.
- Thinking, understanding and knowing: in order to learn effectively, children build up their own understanding through active processes such as play, discovery and encounters with world knowledge and cultures (Millar, 1997).

5.2.2 Curriculum development in Ireland

The primary school curriculum in operation during Phase 2 and 3 of the IEA Preprimary Project was the *Curaclam na Bunscoile* (Primary School Curriculum, 1971). This nationally prescribed curriculum covers the pre-primary and primary years from Junior Infants (4 years) to 6th Class (12 years). In principle, this was and is an integrated curriculum with a child-centred focus. It was organised into the following subject areas: Religion, Gaeilge, English, Mathematics, Art & Craft Activities, Social and Environmental Studies, History, Civics, Geography, Music and Physical Education.

Whilst the philosophy and general orientation of the *Curaclam na Bunscoile* for the first three years (Junior Infants to 1st Class) were associated with an informal approach, the specified aims and activities required high levels of skills, on the part of children, in relation to reading, writing and number (O'Rourke & Archer, 1987).

Although a specific minimum or maximum time for any given subject is not prescribed within the 1971 Curriculum Teacher's Handbook, the Department of Education inspectorate suggested the following allocation of time to the different aspects of the curriculum for 1st to 6th classes following the introduction of the 1971 Curriculum: Irish - 21 per cent; English - 17 per cent; Mathematics - 17 per cent; Social and Environmental Studies - 15 per cent; Arts and Crafts - 11 per cent; Religion - 11 per cent, Music - 6 per cent; Physical Education - 4 per cent (NCCA, 1990).

There has been no study which has examined time allocation for each subject area across all classes in Irish primary schools (NCCA, 1990). However, data from the IEA Third International Mathematics and Science Study (TIMSS) (1997) provides information on the average number of hours per week spent teaching mathematics and science to 9 year-old pupils (see also Section 6.2). Forty-one per cent of Irish teachers of 9 year-olds surveyed in this study spent 5 hours or more teaching mathematics per week, 34 per cent spent between 3.5 and 5 hours and 19 per cent spend between 2 and 3.5 hours. With regard to science, 47 per cent spent less than one hour teaching science per week, 40 per cent replied that they spent between 1 and 2 hours and 11 per cent, between 2 and 3 hours. However, 84 per cent of the Irish teachers surveyed stated that science was not taught as a separate subject (Martin, Mullis, Beaton, Gonzalez, Smith & Kelly, 1997).

In 1991, the National Council for Curriculum and Assessment (NCCA) began a process of reviewing the primary curriculum which would "take account of the rapid social, scientific, and technological change which is taking place". (Department of Education, 1995 p.20).

The revised *Primary School Curriculum*, which was first introduced to primary schools in September 1999 on a phased basis, is organised in six curricular areas: Language; Mathematics; Social, Environmental and Scientific Education (SESE); Arts Education; Physical Education and Social, Personal and Health Education. Each curriculum statement is laid out at four levels: infant classes, first and second class, third and fourth class and fifth and sixth class. Included in the Primary School Curriculum is a time framework which allocates minimum time to each of the curriculum areas. Included in the framework is a 2 hour period of discretionary curriculum time which "can be allocated, at the teacher's and at the schools' discretion, to any of the six curricular areas" (Primary School Curriculum Introduction, 1999, p.68). This curriculum is being phased in, and had not been published at the time of data collection.

5.2.3 Class size

The issue of class size has received considerable attention both in Irish education policy debate and internationally. There is a common assumption among teachers and parents that smaller classes provide a more productive educational environment than larger classes (Blatchford, Goldstein & Mortimore, 1998). However, government departments and policy makers may be unwilling to agree that class size is a major influential factor in educational progress. This may be due, in a large part, to the fact that any commitment to smaller classes involves more teachers and therefore has major resource implications (Blatchford et al., 1998).

In a review of the recent international literature on class size, Podmore (1998) identifies seven areas of research into class size effects in the early years of school. These are class size and

- children's achievement, measured on standardised tests or rated by teachers;
- children's classroom behaviour, motivations, and affect;
- outcomes for different groups of children, focusing on minority groups;
- teacher satisfaction and teacher stress;
- the organisations of instruction, including grouping of children and learning and teaching processes within classrooms;
- cost effectiveness;
- the unique characteristics of small classes.

Most of the research which examines class size as determining child outcomes emphasise the complexity of the area. As Podmore (1989) states

> *links between small class size and children's achievement are confounded by variations in classrooms, pupil characteristics, and instructional processes.*
>
> (p.98)

A 1995 report of the UK Office for Standards in Education (OFSTED) asserts that studies and research into the effects of class size have for the most part failed to demonstrate that pupils necessarily do better in small classes. The report cites the well-known STAR project as the major exception. Project STAR (Student-teacher Achievement Ratio) was an experimental longitudinal study which followed children from kindergarten to 3rd grade. Children were randomly assigned to three class sizes (small 13 - 17, regular, 22 - 25 and regular with full-time teacher aide). Podmore (1998), in reviewing both the STAR research and papers which challenged the STAR project on methodological details concludes:

> *smaller classes appear overall to benefit children with special needs, children from minority groups, and younger children during the first years of school, by facilitating changes in aspects of instructional processes.*
>
> (p. 713)

Other researchers, such as Slavin (1994) highlight the fact that the class size effects are relatively small and hard won. One of the explanations for this has been that in projects such as STAR, teachers may not have changed their teaching methods to take advantage of small classes

> *if teachers go on doing what they have always done, the effects may be more or less the same whether the class size is changed or not.*
>
> (OFSTED, 1995, p.10)

In 1995, OFSTED published a study whereby it utilised the observations of OFSTED inspectors which focused on class size in addition to a number of factors including teaching quality, quality of learning, schools' intake characteristics, school size and location, pupils' behaviour and ethos of school. The principal finding of the study was that reductions in class size do not necessarily lead to better teaching and higher standards. However, the study also concluded that younger pupils (Key Stage 1 i.e. 7 year olds) and pupils learning English as a second language benefit from being taught in smaller classes. The study also examined the impact of classroom assistants (trained and untrained) and concluded that when classroom assistants were well used and managed, their contributions were associated with higher quality teaching. This was the case in larger classes as well as smaller ones. In its conclusions it suggests that it may be more cost effective to provide or increase non-contact time for primary teachers, to appoint more classroom assistants, to target resource weaknesses or to release teachers to attend in-service training courses (OFSTED, 1995).

5.2.4 Class size and pupil-teacher ratio in Ireland

The OECD provides data for international comparison of pupil-teacher ratio (PTR) for a number of countries. Ireland fares badly in these comparisons. In 1994, Irish primary schools had the largest PTR (25.6) in the E.U. (INTO, 1995). The relationship between PTR and class size depends on how schools choose to deploy their teachers and this varies between countries. In Ireland for example, PTR is calculated by dividing the total enrolment in all National schools at the end of September of a given school year by the total number of teachers in service at the end of June the same school year. Total number of teachers includes administrative and non-teaching principals, resource teachers, remedial teachers, Home School Community Liaison (HSCL) teachers (see Section 1.5) and teachers in Special Schools. Average class size (ACS), on the other hand, is calculated by dividing total enrolment in *Ordinary Classes* by the total number of teaching teachers of *Ordinary Classes*.

In 1994/95, the PTR was 23.5 and the ACS was 27.5 students. By 1997/98 the PTR had been reduced to 21.8 and average class size was 26.1 (Department of Education and Science Statistics, 1999). It is also of note that maximum class size in DD schools is 29 and urban Breaking the Cycle schools have a ratio of 1:15 in junior infants to second class.

5.2.5 Classroom Resources

Much of the research in the area of resources and materials in primary classrooms has been in the context of researching effective classroom management (see for example Kyriacou, 1991; Moyles, 1992; Pollard & Tann, 1993). Watkins and Wagner (1987) argue that considerations of display, colour and even lighting can lead to easy changes which affect pupil behaviour. According to Entwistle (1988), the effectiveness of learning depends on the situation in which learning takes place, and the situation is the prime responsibility of the teacher. The key aspects of the physical environment include: involvement of children in decision making about the classroom layout (Coulby & Coulby, 1990) and organisation of materials and resources (Moyles, 1992).

In a study which focused on the exercise of power between teachers and pupils in a small sample of Irish primary schools, Devine (1998) presents data which demonstrates the structuring of adult-child relationships in terms of the absence of children's voice in much of school practice including the organisation of the physical environment. Devine's study, which was based on the views of 133 first, second and fifth class pupils and their class teachers in three primary schools, found that the involvement of children in decisions which could directly affect them was

> *discounted by most teachers for both practical and ideological reasons related to large class size and time constraints, as well as the perceived immaturity of children and the need to learn self control.*
>
> (Devine, 2000 p.28)

5.2.6 Parental Involvement

It is widely believed that parental involvement in the home, at school and in the classroom has a positive influence on academic achievement. In Ireland as elsewhere, there is a presumed consensus regarding the importance of the relationship between home and school, which has more recently conceptualised in terms of a "partnership". Parental involvement has been identified as essential in education policy reform particularly in initiatives aimed at raising educational standards (see also Chapter 1). Furthermore, as Standing (1999) states, parental involvement *per se* has even been constructed as a solution to societal problems. However, research shows the type of parental involvement is important (Athey, 1990).

Within the context of primary education, parental involvement may refer to the provision of positive learning environment at home; helping with homework; parents reading with their children; assisting with school fund-raising; being involved in some school based activities such as concerts or outings and attendance at parent-teacher meetings. However, parental involvement may also mean assisting the class teacher in the classroom by, for example, hearing children read.

Parental involvement is largely a domain of mothers (Keating & Taylorson, 1996; Standing, 1999). Writing about the British context, Standing argues that most parental involvement programmes are based on the assumption that mothers are not in paid employment and are free, able and willing to be involved in school activities. Furthermore, the school-family relationship depends, to some degree, on parent's own academic experiences, teachers' views about parental involvement and a school's willingness to encourage parental involvement (Keating & Taylorson, 1996).

Parental involvement does appear to have effects on younger children's achievement, in particular on children who are at risk (Ferri & Saunders, 1991; Schweinhart & Weikart, 1997; Leseman, 1998). However, disadvantaged families face particular problems with relation to education including lack of home resources and social support which makes parental involvement less likely. Parental involvement both at home and at school presupposes the availability of time, material resources and knowledge of educational system (Standing, 1999). However, Reynolds (1992), in offering a positive view of parental involvement in the classroom for those parents who may not have had a positive educational experience, proposes that it represents a way for parents to invest in their children that is independent of parent education and background characteristics.

Despite its presumed positive influence, there is no consistent evidence that parental involvement has a significant influence on academic outcomes (Reynolds, 1992; White, Taylor & Moss, 1992). In a more recent review of the area, Edwards and David (1997) question the consensus regarding parental involvement and participation in their children's education as being unquestionably necessary and beneficial. They state for example, that it presupposes a one-way relationship between parents and children in which children are implicitly placed as dependent and inert recipients of the decisions and activities of parents and teachers. Indeed, Edwards and Alldred (2000) highlight that amongst UK national policy initiatives and practical schemes at local level, there is no reference to the part children play in home-school relations or the children's views of the process. Edwards and Alldred's study researched year 6 (11-12 year olds) and year 9 (14 -15 year olds) understandings and experiences of parental involvement and home-school relations in three areas which represented diversity in terms of ethnic background, socio-economic background and family forms. All of the children interviewed in this study expressed strong views about the privacy of their home life in relation to schools and teachers. Children in the inner city schools, in particular, did not agree with the need for home-school links.

Perhaps the most commonly researched form of parental involvement at both preschool and primary school is that of parental involvement in supporting children's language development and in particular, learning to read (Martin & Morgan, 1994; Lonigan & Whitehurst, 1998). In studies which involve students from both high socio-economic backgrounds and those living in disadvantaged areas, the home factors that have been found to be associated with reading achievement relate to the degree of structure and routine in the home, guidance on school matters, and the availability in the home of materials and facilities for school learning (Martin & Morgan, 1994).

5.2.7 Parental involvement in Ireland

While the Irish Constitution and more recently the UN Convention on the Rights of the Child, give priority status to the role of parents as primary educators, in practice, parents' roles up until recently have tended to be peripheral to the formal education system. At the instigation of the then Minister for Education, the National Parent's Council (NPC) was established in 1985. In 1990, the Report of the Primary Education Review Body recommended that every school have a clearly defined policy and programme for productive parental involvement. Following the publication of the Review Body report, the NPC published a policy document titled "Parent Associations: Making them Work". Circular 29/91 from the Department of Education requested each Board of Management to take whatever steps were necessary to ensure that a Parents' Association was formed in association with its school.

The 1998 Education Act gives statutory rights to parents to be involved in what happens to their children in school on an individual level. It also gives legal status to parents' collective rights as represented by the National Parents' Council, to actively participate in the education system at school and at national level.

To date, there is no empirical data available on the level or impact of parental involvement in primary education though two reports commissioned by the Department of Education & Science evaluate the elements of parental involvement within the context of particular initiatives. These reports are the Final Evaluation Report of the Early Start Preschool Programme (ERC, 1998) and the Home-School-Community Liaison (HSCL) Scheme (Ryan, 1994). Parental involvement was and is viewed to be an integral aspect of the Early Start Programme. According to the final evaluation report "it was made clear to all parents that they were welcome to spend time in classrooms during sessions and to observe and/or participate in activities with the children". (ERC, 1998 p.108). However, the report also states that there is a need for greater clarification of the role parents might play in classrooms.

The Final Evaluation report of the HSCL Scheme reported favourably on the positive impact the scheme had on parental involvement through provision of such activities as courses for parents, classes on the primary school curriculum, home visits. The evaluator inferred from observations that parents had increased in self-confidence, knew more about what was happening in school and learned how to help their children with school work. However, it was noted that it was too soon to evaluate the effects on pupil achievement of the HSCL scheme as these would likely be long-term (Ryan, 1994).

Between 1994 and 1997, Ireland, through the Education Department in the National University of Ireland, Dublin took part in the International School Effectiveness Research project which involved nine countries in total world-wide. The final report of the Irish study noted that where parents were actively encouraged and facilitated in becoming involved in the school life of their children, the outcomes were very positive (Devine & Swan, 1997) (see Section 6.2.1 for further comment).

Thus, in conclusion it would appear that it is not parental involvement alone, but rather the type and level of parental involvement that may matter to children's experiences of school.

In 1997, the INTO published a report on parental involvement titled: *Parental Involvement: Possibilities for Partnership*. The authors identified the following barriers to the development of parental involvement in Irish primary schools: lack of time and inadequate pre-service and in-service education in the area and the physical difficulties in most primary schools which were not designed with parental involvement in mind. These factors were seen to "severely compromise teachers abilities to liaise effectively with parents" (INTO, 1997, p.21). The INTO report also referred to the attitudinal and professional difficulties among teachers, many of whom felt threatened by what is seen as parental encroachment in a professional domain.

5.2.8 Summary

The IEA Preprimary Project was limited in analysing selected aspects of the 7 year-olds experiences in school. It did not, for example, analyse the student's lunch-time or playground experience, nor seek students' views about their experiences of school life. Notwithstanding this limitation, the literature review has provided an overview of the current thinking regarding a number of central features of primary school life which the IEA Preprimary Project has analysed. While it is acknowledged that these areas do not represent the totality of children's experience in school, the review provides an important context for the findings. Irish primary school students spend approximately 5 hours in school on a daily basis following a prescribed curriculum which necessitates a structured timetable which may or may not involve integration across curricular areas.

5.3 Findings

The findings presented in this chapter relate to elements of the school experience of the sample children as reported by their class teachers. Two hundred and forty nine teachers (out of a total 253 teachers) completed all or part of the teacher questionnaire. There were completed questionnaires from teachers for all but six of the sample children which corresponds to a 98.3 per cent response rate in relation to participating children. Teachers may have had between one to four sample children in their class at the time of data collection[1]. Teachers were also asked a number of questions about their age, training and experience.

The findings are organised under the following headings:

- children's curricular experience
- class size and adult-child ratio
- materials and equipment available in the classroom
- teacher characteristics
- parental involvement.

5.3.1 Children's curricular experience

Class teachers were asked to calculate the number of minutes spent on each curriculum area per week. Teachers were given a grid which had the list of subject areas as per the international questionnaire but which was amended to include Irish language. A number of teachers chose not to complete this grid attaching their personal class timetable instead. Therefore, this data had to be converted into analysable data by calculating average number of minutes per subject per day and then calculating total number of minutes per week per subject. This was a time consuming exercise as it necessitated an examination of the original questionnaire completed by each teacher. The data presented comprises the total school day excluding lunch breaks. The following are some of the findings.

Teachers reported that they spend more time on English (28 per cent) than any other subject area. This was followed by Irish at 21 per cent of total time and Mathematics at 16 per cent. In total therefore, English, Irish and Mathematics accounted for 65 per cent of the total timetable per week. Following these three core areas, the subject which is then allocated most time is Religion (10 per cent). This finding could be accounted for by the fact that the majority of the children who were in 2nd class at the time of data collection would have been preparing for First Holy Communion[2]. Art and Social and Environmental studies were each allocated 7 per cent of the total time per week, Physical Education, 5 per cent and Music 4 per cent. The 'other' category which included such activities as assembly, roll call, free play, drama and quiz games accounted for 2 per cent of the weekly timetable.

Comparing DD and NDD schools, the findings indicate that teachers in DD schools spent less time on Irish (reading, writing and oral work) than teachers in NDD schools (average difference of approx. 50 minutes per week). Teachers in DD schools spent less time on Mathematics, where the difference was 12 minutes per week when compared to NDD schools. Teachers in DD schools spent more time on English (reading, writing and oral work) than those in NDD schools. Over a week this difference was approximately 30 minutes. In the remaining curricular areas there were minor differences between DD and NDD schools (see Table 5.1).

[1] When the sample children were selected at age 4, approximately half were attending preschool settings and half were attending primary school settings. All of the preschool children are now in primary school. In some cases, four sample children who were in the same preschool at 4 years transferred to four different primary schools at age 7. Some primary school children have remained in the setting between phases. However many did not (see Section 3.1).

[2] Religious education is integral to primary education in Ireland. For example, in all schools under the patronage of the Roman Catholic Church, children, who wish to do so, prepare for their First Confession and First Holy Communion in 2nd class and for Confirmation in 6th class with the support of their class teacher and a local priest.

Table 5.1 Number of minutes spent on each curricular area per week			
Subject Area	**DD Schools (N=111) Minutes (% total time per week)**	**NDD Schools (N=138) Minutes (% total time per week)**	**Overall (N=249) Minutes (% total time per week)**
Irish Reading	74.8 (6.0%)	87.6 (6.9%)	81.2 (6.4%)
Irish Writing	63.2 (5.1%)	81.7 (6.4%)	72.5 (5.8%)
Irish Oral	97.4 (7.8%)	114.9 (9.0%)	106.2 (8.4%)
Total Irish	**235.4 (19%)**	**284.2 (22.2%)**	**259.8 (20.6%)**
English Reading	134.9 (10.9%)	117.7 (9.2%)	126.3 (10.0%)
English Writing	133.7 (10.8%)	132.5 (10.4%)	133.1 (10.6%)
English Oral	101.0 (8.1%)	92.0 (7.2%)	96.5 (7.7%)
Total English	**369.5 (29.8%)**	**342.2 (26.8%)**	**355.9 (28.3%)**
Mathematics	196.9 (15.9%)	209.3 (16.4%)	203.1 (16.1%)
Religion	119.4 (9.6%)	122.5 (9.6%)	121.0 (9.6%)
Art	87.4 (7.0%)	83.3 (6.5%)	85.4 (6.8%)
Social & Environmental	83.7 (6.7%)	89.5 (7.0%)	86.6 (6.9%)
Physical Education	57.8 (4.7%)	58.2 (4.6%)	58.0 (4.6%)
Music	51.8 (4.2%)	55.3 (4.3%)	53.6 (4.3%)
Computers	5.4 (0.4%)	6.2 (0.5%)	5.8 (0.5%)
Other	33.6 (2.7%)	26.9 (2.1%)	30.3 (2.4%)
TOTAL	**1241.00**	**1277.60**	**1259.3**

Figure 5.1: Number of minutes spent on each curricular area per week in DD Schools

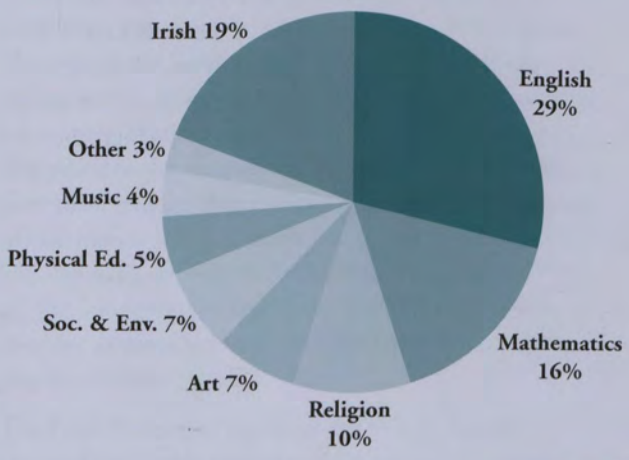


Figure 5.2: Number of minutes spent on each curricular area per week in NDD Schools

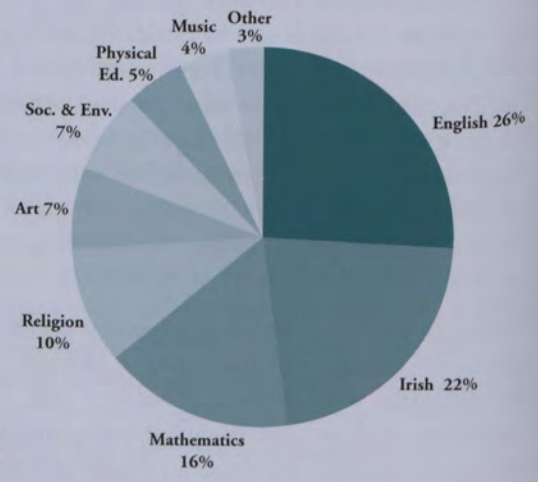
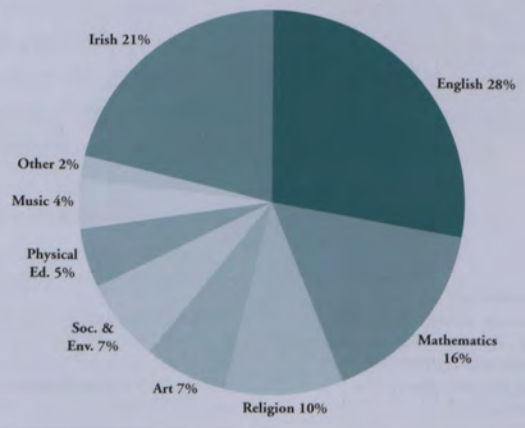


Figure 5.3: Number of minutes spent on each curricular area per week in all Schools



5.3.2 Class size and adult child ratio

Overall, 29 per cent of children were in classrooms of 25 children or fewer and 61 per cent were in classrooms of 29 children or fewer. Average class size in participating DD classrooms was 24 children, whilst children in NDD classrooms were in class sizes which averaged 30 children (see Table 5.2).

Table 5.2 Class size: summary statistics

	DD Schools (N=107)	NDD Schools (N=138)	All (N=245)
Mean	24.0	30.2	27.5
S.D.	5.94	5.36	6.4
Minimum	12	13	12
Maximum	35	38	38

Further analysis was conducted in order to assess the impact of Breaking the Cycle classrooms when calculating average class sizes of the DD Schools. As expected, the mean class size of the Breaking the Cycle classrooms (see section 2.5) was significantly smaller at 15.6 than the class size of DD classrooms which were not part of the Breaking the Cycle Scheme. These classrooms had an average class size of 26 children.

At Phase 2, average class size in the DD junior infant classrooms analysed had been 24.1 and in the NDD junior infant classrooms, it had been 26.7

Teachers were also asked about the number of adults who regularly worked in the classroom. Overall, 92 per cent replied that just one adult (i.e. the class teacher) worked regularly in the classroom. However, nine of the teachers in DD schools and seven of the teachers in NDD schools replied that they had one additional adult working in the classroom (see Table 5.3).

Table 5.3 Number of adults working regularly in the classroom

	DD Schools (N=110)	NDD Schools (N=137)	All (N=247)
1 adult	89.1% 98	94.9% 130	92.3% 228
2 adults	8.2% 9	5.1% 7	6.5% 16
4 adults	2.7% 3	0% 0	0% 3

5.3.3 Grade (class) level at age 7 years

Although the sample children were aged 7 at the time of data collection - they were not all in the same grade level (class level). This was dependent on a number of factors:

- whether they had been in preschool or school at 4 years,
- whether entry to Junior Infants had been delayed by remaining in preschool for another year
- whether they had repeated Junior Infants or Senior Infants

This was just one of the factors which needs to be taken into account when assessing the development status measures (see Chapter 6). The majority of the children overall (66.5 per cent) were in 1st class at the time of data collection. Seventy-three per cent of children in NDD schools and 60 per cent of children in DD schools were in 1st class (see Table 5.4).

Table 5.4 Percentage of children in each class level at 7 years

	DD Schools (N=165)	NDD Schools (N=196)	All (N=361)
Senior Infants	3.0% 5	1.0% 2	1.9% 7
1st Class	59.4% 98	72.4% 142	66.5% 240
2nd Class	37.6% 62	26.5% 52	31.6% 114

5.3.4 Materials and equipment available in the classroom

Class teachers were asked to supply information about the materials and equipment which were available for use in the classroom. They were presented with a list and asked to mark all that applied to their situation and add other materials where necessary. Table 5.5 presents the findings.

Table 5.4 Percentage of children in each class level at 7 years			
	DD Schools	NDD Schools	All
Text books	99.1% 109	99.3% 136	99.2% 245
Other books	99.1% 109	97.8% 134	98.4% 243
Computers	58.2% 64	62.8% 86	60.7% 150
Tape Recorders	98.2% 108	97.8% 134	98.0% 242
Mathematics Materials	92.7% 102	95.6% 130	94.3% 232
Video player + monitor	86.4% 95	80.1% 109	82.9% 204
Television	75.5% 83	75.9% 104	75.7% 187
Classroom Animals	16.4% 18	8.0% 11	11.7% 29

Other materials which teachers identified included: Arts and Crafts materials (14.5 per cent); musical instruments (7.2 per cent); PE games and equipment (6.8 per cent); board games and toys (8.8. per cent); computer printers (1.6 per cent); overhead projectors (4.4. per cent) and globes (1.6 per cent).

Overall, high percentages of teachers replied that they had access to the named items of equipment. The exception to this was classroom animals (12 per cent overall). The fact that 61 per cent of teachers replied that the children had access to computers was unexpected given that the Schools IT 2000 Initiative was just commencing at the time of data collection (see Section 2.6). The findings indicate that the availability of equipment was similar in DD and NDD schools.

5.3.5 Teacher characteristics

Fifty-five per cent (138 teachers) of the teachers who completed the questionnaire were teaching in NDD schools, 36 per cent (89 teachers) in DD schools and 8.8 per cent (22 teachers) in schools which are part of the Breaking the Cycle Scheme.

Ninety per cent of the teachers were women. Teachers' ages ranged from 21 years to 64 years. The mean age of teachers working in DD schools was 36.8 years which was on average 2 years younger than their counterparts in NDD schools. At Phase 2, all of the participating teachers had been women. Since Phase 2, the age profile of participating primary school teachers has altered slightly. For example the average age of teachers at Phase 2 was 39 years.

Table 5.6 Teacher's age: summary statistics			
	DD Schools (N=97)	NDD Schools (N=117)	All (N=214)
Mean	36.8	39.0	38.0
Median	36	38	36.5
S.D.	11.1	10.37	10.75
Minimum	21	21	21
Maximum	60	64	64

Teachers' education and experience

All respondents who responded to the question regarding their qualifications replied that they had specialised qualifications to teach 7 year olds (i.e. they had a teaching qualification). The majority of teachers (70.9%) replied that the highest education level they had achieved was a B.Ed degree. Fifty-four teachers (22.1%) had some college experience and 15 teachers (6.1%) had a Master's degree (see Table 5.7).

Table 5.7 Highest level of education completed by teachers			
	DD Schools (N=108)	NDD Schools (N=136)	All (N=244)
Upper Secondary	0.9% 1	0% 0	0% 1
Some College	19.4% 21	24.3% 33	22.1% 54
Undergraduate Degree	74.1% 80	68.4% 93	70.9% 173
Master's Degree	5.6% 6	6.6% 9	6.1% 15
Not Definable by level	0% 0	0.7% 1	0% 0

Teaching experience

Teachers were also asked about their teaching experience. Overall, the mean number of years of teaching experience was 17 years. Twelve teachers (4.9%) replied that they had one year or less teaching experience. The longest number of years teaching was 46 years. Teachers in NDD schools had on average completed more years teaching (18 years) than teachers in DD schools (15 years).

Table 5.8 Years teaching experience: summary statistics			
	DD Schools (N=108)	NDD Schools (N=136)	All (N=244)
Mean	15.3	18.3	17.0
S.D.	10.27	9.67	10.0
Minimum	<1 year	<1 year	<1 year
Maximum	39	46	46

Regarding the number of years experience working with 7-year-old children, teachers in NDD schools had on average worked 9 years with this age-group and teachers in DD schools had worked 6 years with this age-group.

5.3.6 Parental involvement

As part of the teacher interview, class teachers were asked about the types of opportunities for parents to be involved with the students, or the school. They were presented with a list of examples and asked to tick all that applied to the school in which were working. The list contained the following examples:

- Helping with special occasions
- Helping the children with homework
- Teaching children in the classroom
- Reading to the children
- Sharing a special skill/hobby with the class
- Accompanying class on a field trip
- Assisting with fund-raising
- Attending school association/organisation meetings
- Serving on school advisory board

The most frequently mentioned parental involvement was "help with homework" (93 per cent) which would be an "assumed" help given at home. This was followed by "assisting with fund-raising" (92 per cent) and "attending meetings" (89 per cent). Parents in NDD schools were more likely to be involved in all three activities. However, more teachers in DD schools reported on parents being involved in reading to children. Classroom based parental involvement appears to be much less frequent in both types of schools (see Table 5. 9).

Teachers were also asked to identify other instances of parental involvement in their school which may not have been covered by the above list. By analysing these 'other' categories four new categories were formed during data analysis. These were:

- Parent/Teacher meetings
- Playtime/sports supervision (including swimming and transport to games)
- Attendance at school concerts
- Parenting courses (information or parent education courses).

Regarding the 'other' categories, analysis of the extra information supplied by teachers provided the following details: 5.3 per cent of teachers supplied information that parents attended parent/teacher meetings; 11.8 per cent teachers overall (69 per cent of whom were in NDD schools) said that parents were involved in playtime or sports supervision/transport; 9 teachers overall (3.7 percent) identified attendance or helping with school concerts.

Table 5.9 Percentage of teachers who replied that parents in their school availed of opportunities for parental involvement			
	DD Schools (N=111)	NDD Schools (N=138)	All (N=249)
Special occasions	65.7%	81.2%	74.4%
Help with homework	89.8%	94.9%	92.7%
Teaching children	9.3%	5.8%	7.3%
Reading to children	61.1%	55.1%	57.7%
Sharing special skill	25.0%	34.1%	30.1%
Going on field trip	63.9%	68.1%	66.3%
Assisting with fund-raising	84.3%	97.8%	91.9%
Attending meetings	79.6%	96.4%	89.0%
Serving on advisory board	67.6%	82.6%	76.0%

5.4 Discussion

The definition of curriculum in its broadest sense includes all the activities and experiences from which a child learns, in addition to consideration of how a child learns (process), when a child learns (learning progression) and where and why a child learns (learning context) (Ball, 1994). While not providing data on the

complete received curriculum, the data presented in this chapter includes detailed information on the activities and experiences provided for 7-year-olds in DD and NDD primary schools between 1997 and 1998.

The content of the curriculum subjects taught in Irish primary schools are prescribed nationally as per the Primary School Curriculum (1971)[3]. The findings of the study indicate that most of the children's time in school (65 per cent) was spent in the three core areas of the Irish curriculum: Irish, English and Mathematics. This finding matches the priorities as set out in the time allocation recommended by Department of Education inspectors - recommendations which stem from the 1970's. While the time allocation to Irish (21 per cent of the total time per week) and Mathematics (16 per cent) coincide with the Department of Education recommendations, the extra time spent on English has impacted on other areas by taking away time. This was particularly so in the case of Social & Environmental Studies and Arts & Crafts.

Almost all participating children were in classrooms with just one adult (class teacher). Average class sizes of 27.5 found amongst the classrooms in this study are somewhat higher than the national average in 1997/98 which was 26.1. As expected, due to the provisions of the Scheme of Assistance to Schools in Designated Areas of Disadvantage, DD schools had smaller class sizes. The average smaller classes in DD schools is also accounted for by the figures from the five Breaking the Cycle schools which were part of the sample in Phase 3. Junior classes in these schools have adult:child ratios of 1:15. Children attending NDD classes, on the other hand, were in classes which averaged 30 children per class. The data did not provide information regarding the number of sample children in multi-grade classes, a characteristic of small, mainly rural schools.

Overall, the findings with regard to materials and equipment available to children and teachers present a picture of classrooms with a variety of materials available to them. However, the limitations of the data don't allow commentary on the quality, variety or quantity (except in the case of computers) of materials available. Nor does the data provide information on the organisation of the resources and the extent to which children had access to the materials, issues which have been identified in the literature as being significant in effective classroom management. However, the data does show that almost two-thirds of classes had a computer(s) available. Sixty per cent of these classrooms had just one computer, a further 11 per cent had two computers. Four teachers replied that the 7 year olds in their class had access to 20 computers - three of these were in DD schools. No data was collected on the environment outside the classroom, for example the playground or P.E. hall although the data from the Phase 2 report showed that all schools have access to an outdoor play space.

As expected, all participating children were taught by trained primary schools teachers all of whom had at least a basic teaching qualification. In addition, a number had undertaken postgraduate study. Teaching experience of participating teachers varied widely from being a very recent graduate of teacher training college with less than one year's experience to having 46 years' experience. Generally, teachers in DD schools were younger and less experienced, perhaps reflecting a higher turnover of staff in these schools or the fact that DD schools are often in recently developed urban disadvantaged areas. This finding may also be accounted for by the increased demand for staff in the Breaking the Cycle schools.

It is noteworthy that the vast majority of teachers (90 per cent) of the study were female. Thus, the sample children's preprimary[4] and primary experience has been largely dominated by female teachers (see Section 6.2 for further comment).

A small number of participating teachers (16) had the services of a second adult who worked regularly in the classroom. Although we have no information on the training and background of these 'extra' adults, they may have been workers on Community Employment (C.E.) schemes or parents working voluntarily as assistants (see Section 5.3.6).

The most frequently identified opportunities for parental involvement are not surprising and reflect the traditional activities where either a parent has felt able to participate or have been encouraged to participate namely: help with homework, fund raising, and attending parent-teacher meetings. The relatively low level of parental involvement on advisory boards is surprising given that it is mandatory to have a parent representative on primary school Boards of Management. However, it is possible that this result could be due to confusion with the term used in the interview. Greater clarity of the term, for example separate items for *Board of Management* and *Parent Association* may have resulted in a different response.

[3] A Revised Primary School Curriculum was published in September 1999 and is being introduced on a phased basis.

[4] All the class teachers/caregivers interviewed at Phase 2 were female

5.5 Summary

- Teachers reported that children spent more time on English (28 per cent) than any other curricular area. This was followed by Irish (21 per cent) and Mathematics (16 per cent).
- Children in DD schools spent less time on Mathematics and Irish and more time on English than children in NDD schools. There was very little difference between DD and NDD schools on the amount of time spent on all other curricular areas.
- The average class size in DD schools was 24 children and in NDD classrooms, 30 children. The largest class size noted was a class of 38 children which was in a NDD school.
- The majority of classrooms (92 per cent) had just one adult working in them.
- Sixty-seven per cent of the sample children were in 1st class and 32 per cent were in 2nd class at the time of data collection. The remaining children (2 per cent) were in Senior Infants.
- The availability of equipment was similar in DD and NDD schools with the majority of teachers replying that they had access to the named items of equipment.
- Sixty-three per cent of teachers in NDD schools and 58 per cent in DD schools replied that computers were available for the children's use.
- Ninety per cent of the participating class teachers in the study were women and all teachers had a teaching qualification. Seventy one per cent had a primary degree and 6 per cent had a degree at master's level.
- Teachers in NDD schools had on average, completed more years' teaching (18 years) than teachers in DD schools (15 years).
- The most frequently identified type of parental involvement was "help with homework" (93 per cent), followed by "assisting with fund raising" (92 per cent) and "attending meetings" (89 per cent). Teachers in NDD schools reported a higher level of parental involvement in all categories. The exception to this was in the category of "reading to children".

Chapter 6

Children's Developmental Status at age 7

Children's Developmental Status at Age 7

6.1 Introduction

Research has shown that development status of school going children is affected by a multiplicity of factors such as socio-economic factors (Kellaghan, Weir, Ó hÚallacháin & Morgan, 1995), family characteristics (Kellaghan, Sloane, Alvarez Bloom, 1993), school effects (Mortimore, Sammons, Stoll, Lewis & Ecob, 1988; Tizard et al., 1988), season of birth (Sharp, Hutchinson & Whetton, 1994) and classroom effects such as class size and pupil teacher ratio and parental involvement (see Chapter 5). The complexity of the area is increasingly acknowledged (Sammons, Mortimore & Thomas, 1996). For example, outcomes are likely to be associated with interrelations amongst factors, some internal to a particular education setting or system and some related to features in the broader socio-cultural context (Green, 1996). This chapter presents the findings regarding the developmental status measures administered to the sample children. The literature review which precedes the findings examines a number of issues such as school effectiveness research, gender differences in outcomes, reading, maths and science achievement, and social and emotional development.

6.2 Literature review

6.2.1 School Effectiveness Research

In a review of research on school influences on children's development, Sylva (1994) cites a number of well-known studies on "school effectiveness", a particular focus of educational research in the 1980's and 1990's, which support the hypothesis that school exerts a strong influence on development. Amongst the research cited is the groundbreaking research of Dweck, Leggett and colleagues during the 1980's whereby a number of psychological and educational mechanisms were proposed to explain the reasons behind school effects. Such mediating factors include "mastery" versus "helplessness" approach in learning styles, academic motivation, and attribution of success failure (Leggett & Dweck, 1986; Dweck & Leggett, 1988; Elliot & Dweck, 1988). It has also been recognised that lasting and important attitudes to learning are shaped early (Donaldson, Grieve & Pratt, 1983; Katz, 1995). Furthermore, Brazelton (1992) suggests that academic success rests predominantly on a child's early knowledge of how to learn, as well as what is learned.

More recent analysis of school effectiveness research, such as provided in Gray, Reynolds, Fitzgibbon, and Jesson (1996), suggests that a substantial proportion of the variation in effectiveness in schools is due to variation among classrooms, and that substantial differences between schools are much reduced when the impact of background factors such as the prior achievements of pupils on school entry and the characteristics of the individual, in terms of age, sex, social class or ethnic background, are taken into account. They conclude that

> *Longitudinal, multilevel studies are required to examine the size, consistency and interrelationships between school and classroom effects for different kinds of outcomes and for different phases of schooling.*
>
> (p.24)

Whilst on the one hand recommending that increased attention should be given to experimental design in order to truly understand the impact of actions on outcomes, Tymms (1996) acknowledges that since the changes within a school are unpredictable, they cannot be mathematically modelled with precision. He concludes that it is better to

> *view classrooms as places where relationships and attitudes ebb and flow, where groups form and disband, and where these processes influence attitudes to learning.*
>
> (p.13)

Between 1994 and 1996 Ireland, through the Education Department of the National University of Ireland (NUI), Dublin, took part in the International School Effectiveness Research Project (Devine & Swan, 1997). The study aimed to investigate the factors that are associated with student academic and social outcomes within the particular cultural context in each country. Particular areas investigated included: mathematics achievement, self-concept in mathematics, attitudes towards school, locus of control and democratic attitudes. Two 'effective', two 'typical' and two 'ineffective'[1] schools were selected to take part in the Irish study. The sample comprised 165 seven and eight year old children in both low and middle SES schools. The findings indicated that the classroom climate and degree of enthusiasm displayed by the teacher interacting with the children was highly important in promoting positive self-concept. The authors noted that when parents were actively encouraged and facilitated in becoming involved in the

[1] These categories were based on Department of Education inspectorate evaluations.

school life of their children, the outcomes were positive. Finally, the fact that all children are exposed to the same curriculum does not imply that the overall experience of school will be the same. Devine and Swan (1997) commented that there were considerable differences between schools in a number of different areas.

6.2.2 Gender differences in education

During the same period when school effectiveness was a prominent focus in educational research, largely driven by a policy agenda which posed the question 'how does one tell a 'good' school from a 'bad' one (Gray et al., 1996), gender differences both in terms of gender equity in the classroom and differential developmental outcomes became the focus of both academic research and educational policy. Reflecting a concern about equal opportunities in education for girls and women, it was suggested that girl students were being placed at a disadvantage in classrooms due to the differential interactions teachers have with their male and female students with the result that the classroom climate worked in favour of boys by reinforcing them as "dominant participants". This suggested that male behaviour may act to discourage female educational achievement (NZCER, 1988; Drudy & Uí Chatháin, 1997). More recently however, educational research is focussing on the phenomena of male disadvantage in educational outcomes and adaptation to schooling. This has been demonstrated at all levels of schooling from pre-school to secondary school, although the results are inconsistent (Sammons et al. 1996).

For example, Marcon (1999) has examined the differential impact of three different pre-school models on development and early learning of boys and girls in a cohort study. She cites research that demonstrates that boys do not adjust as well as girls to didactic early learning approaches and that this was especially true for African American boys of lower socio-economic status. In her research she demonstrated that development and achievement of inner-city boys are fostered by approaches that emphasise socio-emotional growth over academics and are hindered by overly academic didactic pre-school experiences (Marcon, 1993).

A study conducted with 1130 boys and 965 girls, 6th grade pupils in Belgian primary schools, suggests that it is not gender composition of the pupil population *per se* that exerts an influence on student well-being, but the gender composition of the teaching staff. Well-being in this study was defined in terms of adaptation to school life, as reflected by characteristics such as self-esteem, sense of mastery, stress, fear of failure, sense of belonging in school, study and school commitment (Brutsaert & Bracke, 1994). The study found that primary school boys are negatively affected by a school environment characterised by a preponderance of female teachers. Indeed, the female-dominated culture of school has for many years also been cited as explaining the gender gap in reading achievement, the argument being that boys may find it difficult to identify with the values and ideals of their, predominantly female teachers and fail therefore, to view reading as a worthwhile activity (Elley, 1993).

A group of researchers in New Zealand examined the educational achievement of a birth cohort of children who were studied from the point of school entry to 18 years (1982 to 1995) (Fergusson & Horwood, 1997). Educational achievement was measured in terms of scores on standardised tests of word recognition, reading comprehension, mathematical reasoning and scholastic ability; teacher ratings of school performance in reading, written expression, spelling and mathematics; and measures of educational outcomes at aged 18. The findings of this study revealed consistent evidence of male educational disadvantage from middle childhood (age 6) to the point of school leaving. This was so, even though there was no difference in ability as measured by IQ scores, suggesting the presence of some set of factors that operate largely independent of cognitive ability which either disadvantages boys or advantages girls. In this study, teachers were asked to rate conduct problems (extent to which the child was described as engaging in aggressive, anti-social or oppositional behaviours in the classroom) and attention problems (the extent to which the child was described as engaging in inattentive, restless, or distractable classroom behaviours). The findings showed that at all ages (6, 8, 10 and 12 years) boys had significantly higher reported rates of both conduct problems and attentional problems. Multiple linear regression methods suggested that gender and school achievement were linked by a causal chain process in which:

1. Gender acted to influence classroom behaviours, with boys being more prone to distractable, disruptive and inattentive behaviours from the point of school entry.
2. Classroom behaviour and, particularly, attentional problems, influenced the child's level of academic achievement throughout his/her school career.
3. By virtue of 1. and 2. boys showed small but consistent deficits in educational achievement throughout their school career (Fergusson & Horwood, 1997 p.91).

Higher reported rates of conduct problems amongst school age boys has been consistently found in both national (Mc Carthy & Boyle, 1986; Martin, 1997) and international research (Achenbach, Howell, Quay & Conners, 1991; Prior, Smart, Sanson & Oberklaid, 1993).

6.2.3 Reading achievement

Probably the most researched area of educational achievement in educational research, both nationally and internationally, has been in the area of reading ability. An Irish study conducted in 1995 compared the reading achievement of 2342 first class pupils, 612 of whom were attending schools in designated areas of disadvantage and 1730 in schools outside designated areas of disadvantage. A standardised test, the Drumcondra Primary Reading Test (DPRT) which has three subtests (word analysis, reading vocabulary, and reading comprehension), was administered. The findings indicated that reading achievement of pupils in disadvantaged schools was significantly lower than that of pupils in non-disadvantaged schools. Furthermore, teachers in disadvantaged schools provided lower ratings of reading achievement for their pupils and had lower expectations for their progress in reading than did teachers in other schools. However, it was also noted that the range of achievement in DD schools was similar to NDD schools although the proportion of high achievers was higher in NDD schools. Measures of reading achievement were generally more strongly related with cognitive processes[2] and school engagement factors than with other pupil characteristics such as home processes and mother's occupation (Mc Donald, 1998).

Between 1990 and 1991, the IEA conducted a cross-national Reading Literacy Survey in 32 countries including Ireland (Elley, 1992). The survey was conducted on random samples of 9 and 14 year olds and their teachers. Amongst the findings included the following: the factors which consistently differentiated high-scoring and low-scoring countries were large school libraries, large classroom libraries, regular book borrowing, frequent silent reading in class, frequent story reading aloud by teachers, and more scheduled hours spent teaching the language. It is interesting to note that formal instruction in reading did not begin until age seven in four of the ten highest scoring countries (Finland, Sweden, Norway and Iceland). However, when achievement scores were adjusted for economic and social circumstances across all countries, an earlier start (identified in the study as 5 years) was generally found to be an advantage. Girls achieved at higher levels than boys in all countries at age 9, and in most countries at age 14. The mean difference, favouring girls, dropped from 12 points to 7 points at age fourteen.

Two possible explanations are given for the differences in reading achievement between boys and girls. Firstly, the effect of a female dominated teaching staff – although the findings in this regard are not consistent. Secondly, the differential maturational rates of boys and girls have been identified as an explanation. Hence, an early start in formal reading instruction may be too early for many boys and may lead to persisting problems for them. This was particularly cited in the case of Ireland which was one of the three countries with the largest gender gap in reading achievement which also began reading instruction at age 5. In fact gender differences were greater in Ireland than in most other participating countries (Martin & Morgan, 1994). The Irish sample in the IEA Literacy study was from a 3rd class population stratified by size of school, and gender composition (mixed or all boys/all girls). Ireland was placed 12th overall out of the participating countries.

Martin and Morgan (1994) undertook further analysis of the Irish data. They found that the advantage of girls over boys was greater at lower levels of performance and estimated that nearly three times as many boys as girls had reading problems. This was based on the criterion of being one standard deviation below the international mean. In addition to citing differential maturation rates as a possible cause, Martin and Morgan cited cognitive and attributional models of motivation as explaining the differential in scores as follows: if boys are encountering failure with reading from the very beginning of schooling, this may result in negative internal attributions ('I'm no good at reading') which would be followed by subsequent failure to try hard even when conditions become more favourable (p.45).

6.2.4 Mathematics and Science Achievement

The IEA has also co-ordinated a large study of Mathematics and Science achievement in 3rd/4th grade students (9 year olds), 8th grade students (13 year olds) and students in the last year of secondary school. The 3rd International Mathematics and Science Study (TIMSS) was conducted in 45 countries world-wide including Ireland during the 1994/95 school year. In most countries the gender difference in mathematics achievement was small or essentially non-existent but differences that did exist tended to favour boys. However, this was not the case in Ireland where girls out performed boys overall in both 3rd and 4th class although the difference was not significant with the exception of the sub-category of geometry where there was a significant difference. Interestingly, along with students in Scotland, the Irish female students were unique in liking mathematics better than Irish male students. In most countries, boys and girls were equally positive about mathematics (Mullis et al. 1997).

[2] Cognitive processes included abstract thought, expressive language and receptive language.

In science, the gender difference at 3rd and 4th grades were much less than at 7th or 8th grades. The findings show an international pattern of gender differences favouring males – but few significant differences for individual countries. Ireland was one of nine countries where there was no statistical differences in science achievement although overall boys scored higher than girls in both 3rd and 4th classes. Similar to the situation with regard to liking mathematics, a greater proportion of Irish girls reported liking science than boys. Along with Iceland, Ireland was unique in this finding – in most countries girls and boys were equally positive (Martin et al. 1997).

In a review of the recent empirical research on gender differences Ruble and Martin (1998) conclude that in a number of domains especially cognitive abilities, the results of meta-analyses have suggested that over the past 20 years differences are disappearing. While moderately strong gender differences, in favour of boys, are found for some components of spatial skills, primarily in adolescents, gender differences in verbal ability are now weak or inconsistent.

In summary, developmental outcomes of children are affected by a range of inter-relating factors, some of which are internal to a particular educational setting, some of which pertain to the individual child, such as gender, age, socio-economic status, and some of which relate to the broader socio-cultural context. Although there has been a shift in focus from female education disadvantage to male disadvantage at all levels of education, differences between boys and girls in developmental outcomes have been inconsistent. Nevertheless, a key consideration would seem to be the differential maturation rates between boys and girls.

6.2.5 Social and emotional development

In Section 6.2.1, reference was made to psychological processes such as mastery versus helplessness approach in learning styles, academic motivation, and attribution of success or failure as contributing to or explaining school effects on children's development. In the past two decades there has been a rapid expansion of theories and empirical work in this area. In her introduction to Volume Three of the Handbook of Child Psychology, which provides a review of the conceptual and empirical work on social, emotional and personality development, Eisenberg (1998) highlights how developments in this area are increasingly viewed as a consequence of social interactions that are shaped by contextual factors and characteristics of all participants in the interaction.

A number of aspects of social and emotional development are highlighted in the present review. These are: peer relationships, self esteem, achievement motivation and perceived competence. Reference is also made to how interaction with the familial and school contexts affect development in these areas. Of particular note is the recognition of developmental considerations in research in these areas.

In developmental terms, the sample children in the IEA Preprimary Project, at seven years of age, were in a transition between the period described as *Early Childhood* to a period described as *Middle Childhood.* This transition is characteristised by the emergence of a number of cognitive abilities which affect children's view of themselves and their relationships with others.

6.2.5.1 Peer relationships

The school-age years represent a dramatic shift in the social context for most children in western cultures (Higgins & Parsons, 1983 cited in Rubin, Bukowski & Parker, 1998). The proportion of social interactions that involve peers increases. Additionally, peer interactions become less closely supervised by parents and other children. Middle childhood is characterised by participation in stable social groups which are voluntary, friendship based, and almost always comprise same-sex children (Kindermann, McCollom & Gibson, 1995 cited in Rubin et al., 1998). Not surprisingly therefore, children's appreciation of their own and other children's popularity, in addition to their concerns about acceptance in the peer group, rise sharply during this time (Rubin et al., 1998).

Acceptance by peers is largely a function of the child's social skills (Rubin et al., 1998). In a study of 5-10 year olds, Stocker and Dunn (1990) cited in Rubin et al. (1998) found that sociability and emotionality were associated with the quality of children's friendships as well as their general acceptance in the peer group. In this study, children reported to be more sociable were rated as having more positive relationships with friends and judged to be more popular with peers than children who were less sociable. Factors that have been found to be characteristic of popular children (helpfulness, moderate levels of self-assertion, sensitivity) are those which facilitate interaction with others. On the other hand, the factors which have been linked to peer rejection: aggression, disruptiveness and hostility, are characteristics that make interactions and belonging to a group difficult (Rubin et al. 1998).

6.2.5.2 Perceived competence

Differing beliefs about competency have been shown to have a powerful bearing on academic achievement, popularity and self-esteem. A growing body of developmental literature has revealed that young children

are relatively inaccurate judges of their abilities, and demonstrate inflated self-evaluations and competence related beliefs (Harter, 1998). Children in early childhood focus on temporal comparisons ('how I am performing now, compared to when I was younger') and age norms, rather than comparisons with peers. The fact that there is such rapid skill development during early childhood contributes to the characteristic positive self-evaluations (Harter, 1998).

The less positive self-evaluation judgements of children as they move into middle childhood can be accounted for by the emergence of cognitive abilities which allow children to: engage in social comparisons with peers; make distinctions between real and ideal self-concepts; the development of perspective-taking abilities leading to a more accurate view of others' views of their abilities and attributes; an increased capacity for self reflection; and an increased differentiation between concepts of effort and ability (Harter, 1998).

Research, largely based on self-report measures, has also demonstrated that expectancies for success also decrease during middle childhood (Eccles, Wigfield, & Schiefele, 1998). Whereas 4 to 5 year olds expect to do well on specific tasks, even after repeated failure (Stipek, 1984 cited in Eccles et al., 1998) across the primary school years, children become more sensitive to both success and failure experiences and their expectancies of success become more directly linked to their actual performance history. However, it is noteworthy that more recent research studies (see Spidek et al., 1992; Heyman, Dweck & Cain 1993 cited in Eccles et al. 1998) which observed children's reactions to certain tasks, demonstrate that not all young children are optimistic about their abilities. In these studies, preschool children reacted quite negatively to failure, reporting that their failures mean that they are not good people.

As changes in the school environment and classroom management during the primary school years make evaluation more open and competition between students more likely, some children's self-assessments will decline as they get older. One common classroom practice that has been studied is the practice of placing children in reading groups according to ability. Alexander et al. (1993) demonstrated that difference in 1st grade reading group placement and teacher-student interactions have a significant effect (which is net of beginning difference in competence) on motivation and achievement several years later. Further research showed that the effects are mediated by both differential instruction and the exaggerating impact of ability group placement on both parents' and teachers' views of the childrens' abilities, talents and motivations (Pallas et al., 1994 cited in Eccles et al., 1998). Interestingly, in examining the role of appraisals of peer groups on self-esteem, Harter (1998) notes that at every developmental level right up to adulthood, approval from peers in the more public domain (e.g. classmates) is far more predictive of self-esteem than is approval from one's close friends.

When gender differences in competence related beliefs are found, they tend to favour males but are generally small. Differences are generally consistent with gender-role stereotypes (boys in maths and sports: girls in reading, languages and social activities) (Eccles et al., 1998). These stereotypes are also evident in parents' rating of children and their attributions of success. Parents of boys rated natural talent as a more important reason for their children's maths successes than parents of girls. In contrast, parents of girls rated effort as a more important reason for their children's math successes (Eccles et al., 1998).

6.2.5.3 Relationship between family context and self-esteem

As summarised in Chapter 4, the effects of family demographic characteristics on children's developmental outcomes are almost always indirect, mediated by their association with parents' beliefs, practices and psychological resources. According to Eccles et al. (1998) these often override the effects of even the most stressful demographic characteristics on children's school achievement and motivation. Noteworthy is the finding that amongst young children, parental approval has been found to be more predictive of self-esteem than approval from peers. Furthermore, although the correlation between peer approval and self esteem has been found to increase with development, the correlation between parental approval and self-esteem does not decline at least through to adolescence. Regarding the question as to how parents form their impressions of their children's abilities, it would appear that parents rely quite heavily on objective feedback, such as school grades. Citing Epstein's research on school-family connectedness (Epstein, 1992), Eccles et al. (1998) state that the effect of report cards (school reports on children given to parents) depends on the larger communication context between the school and the family. Eccles et al. (1998) conclude that when teachers attempt, systematically and frequently, to inform parents of progress in school, parents can develop a better understanding of the nature and the difficulty of the tasks that need to be accomplished as well as their children's academic performance and motivation.

6.2.5.4 Attribution of success and failure

One further area in social and emotional research which has direct implications for children's development and achievements in school is the work of Weiner (1985) and

Bandura (1994) on attribution of success and failure and internal versus external locus of control. Eccles et al. (1998) summarise the research as follows:

> *attributions are important because they influence subsequent achievement strivings in both positive and negative ways...Individuals who attribute success to ability and effort will have positive affect and will expect to do well on similar tasks in the future because they think they have control over these outcomes...In contrast, individuals who attribute failure to lack of ability will feel shameful and will lower their future expectancies because they think they have little control over subsequent outcomes.*
>
> pp.1022-1023.

However, researchers have recognised that the neat distinctions between causal categories in Weiner's model cannot be applied to children of different ages. Young children see ability and effort as complementary and do not fully distinguish between the two constructs. By age 11 to 12, children also come to understand that people with less ability need to try harder to reach the same level of success as people with more ability i.e. trying harder means one is less able.

6.3 Measuring child developmental status: key considerations

One of the main aims of the IEA Preprimary Project was the assessment of the developmental status of the 374 participating children. While the original sampling procedures of the project ensured four sample cells of comparative size - children were attending either DD preschools, NDD preschools, DD primary schools, or NDD primary schools - the educational experience of the IEA sample children between their 4th and their 7th birthday was not controllable by the researchers. Hence, the project had no control over whether the children had attended DD or NDD schools, single sex or mixed sex schools, private or state schools. Furthermore, whilst all children were between 7 years 0 months and 7 years 11 months at the time of testing, not all were in the same class grade (see Section 5.3.3) and data was collected at different times during the school year. Additionally, some children were in single grade classes, whilst others were in multi-grade classes. Developmental outcomes are likely to be affected by differences in maturation when taking developmental assessments and stage of school year at time of testing (Sylva, 1999). Therefore, these factors need to be acknowledged when interpreting the findings that follow.

Child Development Status measurements were administered to all 374 child individually in four areas:

- cognitive development
- language development
- academic status
- social/emotional development

Data collection procedures are outlined in Section 3.10.

The International Co-ordinating Committee selected test items from a variety of standardised tests based on the pilot phase carried out in each participating country (see Appendix 2 for complete references).

Cognitive development

The cognitive development measure assessed the children's knowledge and skills in five distinct areas: spatial relations, quantity, time, memory and problem solving. Children were required to respond verbally, or by pointing to a picture or by performing an action. For example in the spatial relations section, the child was presented with picture and asked the following: "*Look at the people. Point to the people who are walking in* ***opposite*** *directions*". One of the items in the quantity section asked the child to "*Look at the group of stars and the groups of dots. Point to the group of dots that has the* ***same number*** *of dots as there are stars.*" The memory section measured child's ability to remember numerical order, word order, sentences and also motor memory and object sequence. Finally, the problem solving section consisted of symbolic relation's items, which involved selecting a design to complete a pattern and logical solutions whereby the child was presented with scenarios illustrated pictorially and the data collector posed questions about each problem.

Language development

The language developmental status measure assessed the children's expressive and receptive language development. Children were required to respond verbally or point to a picture. For example, in one item the data collector spoke a sentence with a word left out and the child was asked to supply the missing word: "*He weighs a lot. He is very ( )*". Another item required the child to identify which word does not go with the others, for example: "*ball, bike, doll, cat*". A further item required the child to make a sentence with two related words. For example: "*as, sad*". This measure also required children to identify how a group of words were similar. For example: *lake, pond, river, stream, ocean.* The children also had the opportunity to answer examples or practice items in order that the data collector could establish whether the child understood what was been required of him/her for each item.

Academic status

The academic status measure comprised a Mathematics, Reading Comprehension and Science Section. In the mathematics section specific problems were presented in addition, subtraction, multiplication and division for the child to solve and record their answer on response sheet. The mathematics section also included word problems, which were read to the child. For example: "A child had 40 marbles. He lost 3 marbles and then someone gave him 5 marbles. How many marbles does he have now?" Further items in the mathematics assessment required the interpretation of different kinds of graphs. The reading comprehension consisted of picture comprehension, sentence comprehension and story comprehension items. The Science section, which used illustrations and graphs had questions about the rain cycle, temperature, estimation, planets, measuring bounce and soil.

Social emotional development

The social emotional development of the sample children was measured from the perspective of the child, the parent and the teacher. A variety of measures were utilised. For example, The *Pictorial Scale of Perceived Competence and Social Acceptance for Young Children* included three factors or subscales: cognitive competence, peer acceptance and maternal acceptance[3]. The child's measure utilised pictures, which illustrated a child working with numbers, in a playground etc. By selecting a picture ("Which girl is most like you"?) and refining the selection ("Are you not good or sort of good at numbers"?), the child received a score between 1 and 4 for each item. Teachers and parents were posed the same questions but in a different format e.g. "This child is good at numbers" or "This child gets asked to play with by others".

A locus of control measure was also administered to the child. The measure used was designed to measure the extent to which a child construes event outcomes (positive and negative) as being due to his own actions (internally controlled) or to the whims and/or manipulations of fate, chance, or others (externally controlled). In the administration of the scale, the child is asked to say 'yes' or 'no' to each item as it is read to him, and the scale is scored in terms of the total number of responses in the direction of internal control. For example "When you have trouble understanding something in school, is it usually

A. Because the teacher did not explain it clearly, or

B. Because you were not listening carefully".

Finally, teachers were also asked to rate the sample children in their class using items from the Pupil Behaviour Inventory (PBI) and the Ypsilanti Rating Scale (YRS). The PBI presented the teacher with 20 statements and the teacher was asked how true each statement was for the child. The PBI can be divided into three subscales: academic motivation, classroom conduct, personal behaviour. The items from the YRS form an academic potential factor.

6.4 Findings

Scores for all measures are presented according to school type (DD or NDD) and gender. In all cases, the mean, the standard deviation (SD) and the range are given. Where they exist, statistical differences between scores are also indicated. The findings are organised under the following headings:

- Cognitive development
- Language development
- Mathematics
- Reading comprehension
- Science
- Social and emotional development

6.4.1 Cognitive development

Out of a maximum score of 57 points, children attending DD schools achieved 37.2 points and children in NDD schools scored 41.1 points (S.D. = 7.57). There was a statistical significant difference between scoring of children in DD and NDD schools ($t=5.37$, $df=340$ $p<0.01$). Greater variation in the scores amongst the children in DD schools than in NDD schools was also apparent.

Comparing the scores of boys and girls within the DD schools, girls scored significantly higher than boys (38.8 compared to 35.5) ($t=2.99$, $df=173$, $p<0.01$) however, the opposite was evident within the NDD schools where boys had a higher score than girls (41.7 compared to 40.4). This difference was not statistically significant[4] (see Table 6.2).

Table 6.1 Cognitive development: summary statistics

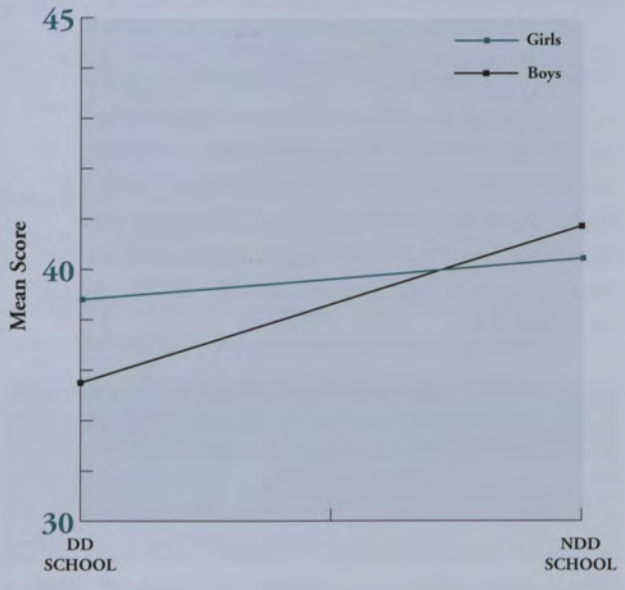
	DD Schools (N=175)	NDD Schools (N=199)
Mean	37.2	41.1
S.D.	7.57	6.29
Range	11-50	16-53

[3] Maternal acceptance items included in child and parent measure only.

[4] Where a difference between scores is indicated as not being significant the *p* value is greater than 0.05.

Table 6.2 Mean cognitive development by school type and gender				
	DD Schools		NDD Schools	
	Boys (N=87)	Girls (N=88)	Boys (N=106)	Girls (N=93)
Mean	35.5	38.8	41.7	40.4
S.D.	7.62	7.18	5.44	7.11
Range	15-48	11-50	29-53	16-52

Figure 6.1: Mean cognitive development by school type and gender



In examining the overall scores of boys and girls in each of the subsections of the cognitive developmental assessment, girls scored higher than boys on four of the subsections and scored equally with boys on quantity. The difference between boys and girls overall is minimal at 0.3 of a point and is not statistically significant (see Table 6.3). Table 6.4 presents the findings of all subsections for both boys and girls in DD and NDD schools.

Table 6.3 Cognitive subtotals by gender			
	Boys (N=193)	Girls (N=181)	Max. Score Possible
Space	7.1	7.5	9
Quantity	4.1	4.1	6
Time	6.2	6.4	9
Memory	7.9	8.0	13
Problem Solving	13.5	13.9	20
Total	**38.9**	**39.6**	**57**

Table 6.4 Mean cognitive development by school type and gender			
	DD Schools (N=175)		
	Boys (N=87)	Girls (N=88)	Overall (N=175)
Space	6.4	7.4	6.9
Quantity	3.8	4.0	3.9
Time	5.3	6.3	5.8
Memory	7.2	7.7	7.5
Problem Solving	12.7	13.9	13.3
Total	**35.5**	**38.8**	**37.2**
	NDD Schools (N=199)		
	Boys (N=106)	Girls (N=93)	Overall (N=199)
Space	7.7	7.7	7.7
Quantity	4.3	4.2	4.3
Time	6.9	6.5	6.7
Memory	8.6	8.2	8.4
Problem Solving	14.1	13.9	14.0
Total	**41.7**	**40.4**	**41.1**

6.4.2 Language development

Out of a maximum possible total score of 43 points, children in DD schools score a total of 27.3 points (SD=7.55) while those in NDD schools scored 30.8 points (SD = 5.70) (see Table 6.5). The difference between these scores was statistically significant ($t=4.91$, $df=321$, $p<0.01$). As was the case in the cognitive development, there was greater variation amongst the scores of the children in DD schools than in NDD schools.

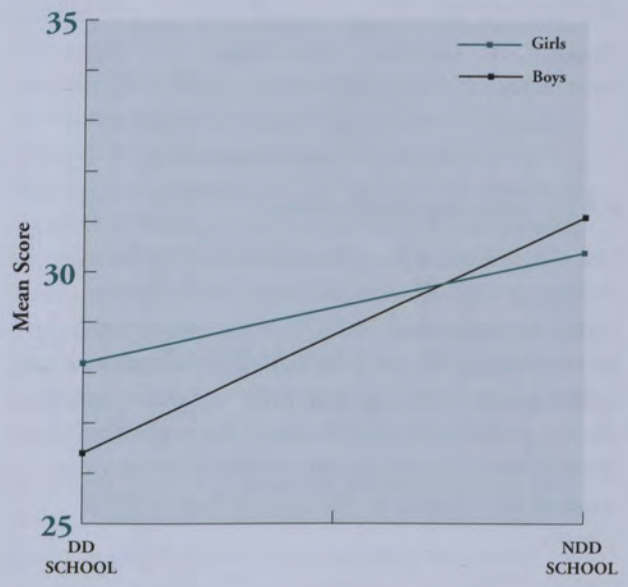
Table 6.5 Language development: summary statistics		
	DD Schools (N=175)	NDD Schools (N=199)
Mean	27.3	30.8
SD	7.55	5.70
Range	5-42	12-43

Comparing the scores of boys and girls, it was found that the boys attending NDD schools scored highest, and boys attending DD schools scored lowest of all 4 groups (see Table 6.6). Overall however, girls scored marginally higher than boys (29.3 compared to 29.0) The difference in scores was not statistically significant (see Table 6.7).

Table 6.6 Mean language development by school type and gender				
	DD Schools (N=175)		NDD Schools (N=199)	
	Boys (N=87)	Girls (N=88)	Boys (N=106)	Girls (N=93)
Mean	26.4	28.2	31.1	30.4
S.D.	7.92	7.09	5.75	5.65
Range	5-39	8-42	18-43	12-42

Table 6.7 Mean language development by gender		
	Boys (N=193)	Girls (N=181)
Mean	29.0	29.3
S.D.	7.18	6.50
Range	5-43	8-42

Figure 6.2 Mean language development by school type and gender



6.4.3 Academic status – Mathematics

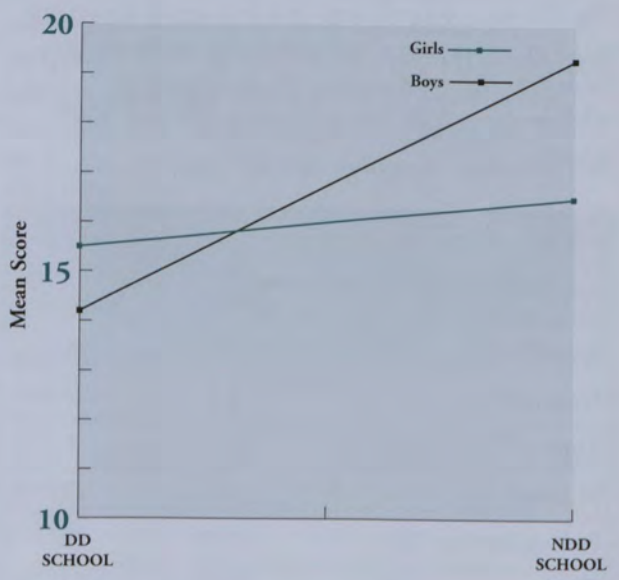
Children in NDD schools scored higher than those in DD schools in the mathematics assessment. The maximum possible score was 35. The children in NDD schools achieved an average of 18.0 points (SD = 5.98) while those in DD schools achieved an average of 14.9 points (SD = 6.69). The difference in scores was statistically significant (t= 4.77, df=371 p<0.01) (see Table 6.8). The low scoring on this measure overall could be accounted for by the fact that 8 of the 16 number operation items involved multiplication and division which, according to the Irish Primary School Curriculum, is only introduced in the 1st and 2nd class programme in the form of equal grouping. It will be interesting to compare Irish findings in mathematics with other participating countries, when the International Monograph on the developmental outcomes is published.

Table 6.8 Mathematics: summary statistics		
	DD Schools (N=175)	NDD Schools (N=199)
Mean	14.9	18.0
S.D.	6.69	5.98
Range	0-32	5-33

Overall boys scored higher than girls (17.1 compared to 16.0) although the difference was not statistically significant. However, if we examine the breakdown within the DD and NDD schools, the girls achieved higher scores than the boys in the DD schools (not significant), whilst the boys scored significantly higher than the girls in NDD schools (t=3.47, df=297, p<0.01) (see Table 6.9).

Table 6.9 Mean mathematcis scores by school type and gender				
	DD Schools (N=174)		NDD Schools (N=199)	
	Boys (N=87)	Girls (N=87)	Boys (N=106)	Girls (N=93)
Mean	14.2	15.5	19.3	16.5
S.D.	7.01	6.34	5.39	6.27
Range	0-32	4-31	10-33	5-32

Figure 6.3 Mean mathematics score by school type and gender



6.4.4 Academic status - Reading comprehension

Comparing the scores of the children in DD and NDD schools for reading comprehension (maximum possible score 37), the results indicate that the children in NDD schools scored an average of 27.1 points (SD = 7.35) whilst their counterparts in DD schools scored an average of 23.7 points (SD = 8.49). The difference in scores was statistically significant (t=4.03, df=345, p<0.01) (see Table 6.10).

Table 6.10 Reading comprehension: summary statistics

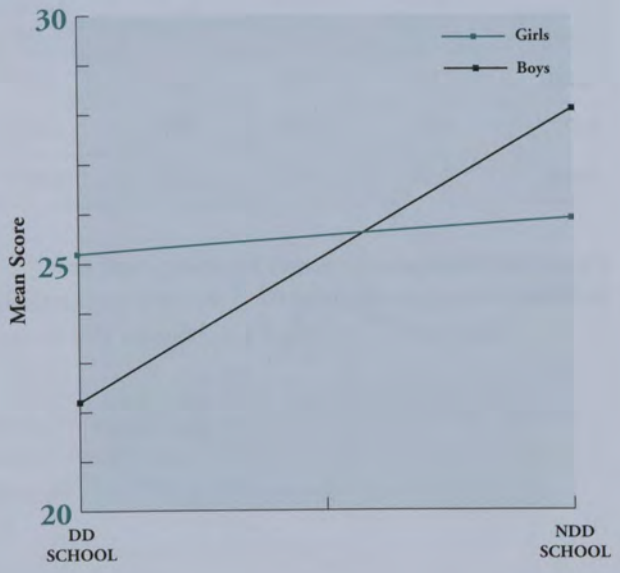
	DD Schools (N=174)	NDD Schools (N=198)
Mean	23.7	27.1
SD	8.49	7.35
Range	4-37	2-37

Overall, girls scored marginally higher than boys (25.6 compared to 25.4) did and this difference was not significant. However, in common with the other measures, if we examine school type and gender together, boys in NDD schools scored highest and boys in DD schools scored lowest (see Table 6.11). There was a significant difference in scores between boys and girls in favour of girls (t=2.09, df=196, p<0.05) within DD schools. Within NDD schools, there was a significant difference between boys and girls in favour of girls (t=2.38, df=172, p<0.05).

Table 6.11 Mean reading comprehension scores by school type and gender

	DD Schools (N=174)		NDD Schools (N=198)	
	Boys (N=87)	Girls (N=87)	Boys (N=105)	Girls (N=93)
Mean	22.2	25.2	28.1	25.9
S.D.	8.67	8.07	6.54	8.05
Range	4-35	5-37	4-37	2-36

Figure 6.4 Mean reading comprehension scores by school type and gender



6.4.5 Academic status - Science

The mean score achieved in the Science measure by children in DD schools was 19.6 (SD = 6.08) and in NDD schools it was 22.5 (SD = 5.45). The maximum possible score was 31 points. There was a statistically significant difference between the scores of the children in DD and NDD schools (t=4.78, df=370, p<0.01) (see Table 6.12).

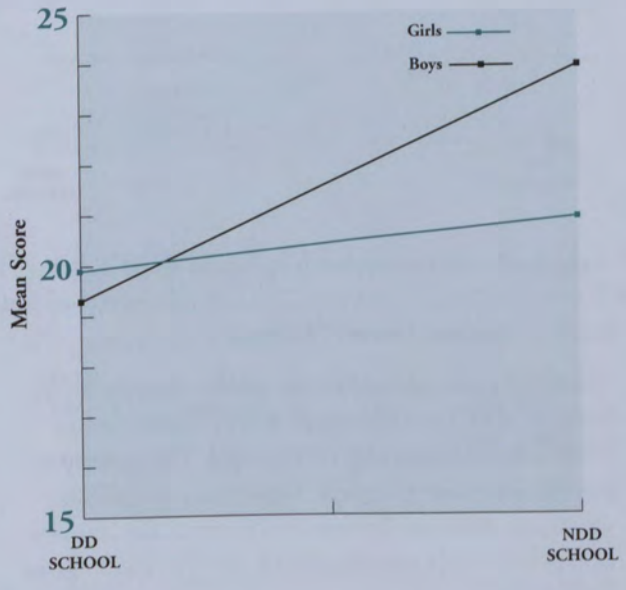
Table 6.12 Science: summary statistics

	DD Schools (N=174)	NDD Schools (N=198)
Mean	19.6	22.5
SD	6.08	5.45
Range	1-31	6-31

Overall, boys scored significantly higher than girls (21.8 compared to 20.4 points) (t=2.37, df=370, p<0.05). However, if we look at boys and girls within the DD and NDD schools separately, girls in the DD schools scored marginally higher than boys in DD schools, whilst the boys in NDD schools achieved the highest scores overall (see Table 6.13) There was a significant difference between the scores of boys and girls in NDD schools (t=4.03, df=169, p<0.01).

Table 6.13 Mean science scores by school type and gender				
	DD Schools (N=175)		NDD Schools (N=199)	
	Boys (N=87)	Girls (N=87)	Boys (N=105)	Girls (N=93)
Mean	19.3	19.9	23.9	20.9
S.D.	6.60	5.53	4.47	6.00
Range	1-31	7-30	12-31	6-31

Figure 6.5 Mean science scores by school type and gender



6.4.6 Social and emotional development

As outlined in Section 6.3, social and emotional development was measured using a variety of instruments and from the perspectives of the child, teacher and parent. Three areas are presented. Firstly, perceived competence and social acceptance (rated by child, parent and teacher); secondly, academic potential, classroom conduct and personal behaviour (as rated by teachers); thirdly, locus of control (children).

6.4.6.1 Perceived competence and social acceptance

The findings indicate that children attending DD schools achieved a slightly higher total perceived competence and social acceptance score of 40.2 (maximum 48 points) compared to their counterparts in NDD schools at 39.2. There was no statistical significant difference between these scores (see Table 6.14).

Table 6.14 Perceived competence and social acceptance scores: summary statistics		
	DD Schools (N=172)	NDD Schools (N=198)
Mean	40.2	39.2
SD	5.53	4.84
Range	21-48	25-48

The scores in this area were very similar across all groups. The difference in scoring between boys and girls overall, was not statistically significant. It is of note, however, that this is the only measure where the boys in the DD schools scored highest although the difference in scoring was very slight.

Table 6.15 Mean percieved competence and social acceptance scores by school type and gender				
	DD Schools (N=175)		NDD Schools (N=199)	
	Boys (N=85)	Girls (N=87)	Boys (N=105)	Girls (N=93)
Mean	40.5	39.8	39.0	39.4
S.D.	5.26	5.79	4.48	5.23
Range	24-48	21-48	25-47	26.48

Figure 6.6 Mean perceived competence and social acceptance score by school type and gender

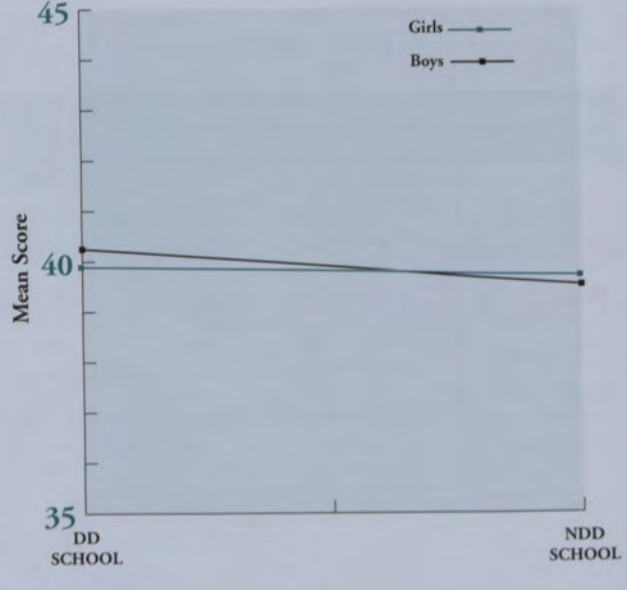


Table 6.16 Perceived competence and social acceptance mean subtotals by school type and gender

	DD Schools (N=175)			NDD Schools (N=199)			Maximum Score Possible
	Boys (N=86)	Girls (N=87)	All (N=173)	Boys (N=105)	Girls (N=93)	All (N=198)	
Peer acceptance	9.9	9.6	9.8	7.7	7.7	7.7	12
Cognitive competence	17.7	17.7	17.7	17.4	17.5	17.4	20
Maternal acceptance	12.7	12.3	12.5	11.7	12.2	11.9	16

Looking at the breakdown of the perceived competence and social acceptance measure in its three sub-categories: peer acceptance, cognitive competence and maternal acceptance, children in DD schools score higher on all three sub-categories.

Parents and teachers were also asked to rate the sample children in terms of cognitive competence. The findings indicate great similarity between the DD and NDD schools regarding how parents rate their children's cognitive competence. Overall, teachers rate the children's cognitive competence lower than parents. This is the case in both DD and NDD schools and for boys and girls.

Table 6.17 Parents' and teachers' ratings of cognitive competence by school type and gender

	DD Schools (N=175)			NDD Schools (N=199)			Maximum Score Possible
	Boys (N=87)	Girls (N=88)	All (N=175)	Boys (N=106)	Girls (N=93)	All (N=199)	
Parents' rating	16.7	17.8	17.3	17.2	17.2	17.2	20
Teachers' rating	13.7	14.9	14.3	15.3	15.8	15.5	20

Only the parents and children rated maternal acceptance. Scores in DD and NDD schools were very similar. Overall, mothers rate their "maternal acceptance" higher than their children. This was the case in both DD and NDD schools and for boys and girls.

Table 6.18 Parent's and children's ratings of maternal acceptance by school type and gender

	DD Schools (N=175)			NDD Schools (N=199)			Maximum Score Possible
	Boys (N=87)	Girls (N=88)	Overall (N=175)	Boys (N=106)	Girls (N=93)	Overall (N=199)	
Childrens' rating	12.7	12.3	12.5	11.7	12.2	11.9	16
Parents' rating	13.8	14.0	13.9	14.0	13.7	13.9	16

Regarding peer acceptance, the findings indicate that teachers rated peer acceptance slightly lower than the children do (see Table 6.19).

Table 6.19 Teachers' and childrens' ratings of peer acceptance by school type and gender

	DD Schools (N=175)			NDD Schools (N=199)			Maximum Score Possible
	Boys (N=87)	Girls (N=88)	Overall (N=175)	Boys (N=106)	Girls (N=93)	Overall (N=199)	
Childrens' rating	9.9	9.6	9.8	9.7	9.7	9.7	12
Teachers' rating	8.7	9.4	9.1	9.5	9.3	9.4	12

6.5.1.1 *Academic potential, academic motivation, classroom conduct and personal behaviour*

Teachers interviewed were also asked to rate the sample children in their care on a further measure, the Pupil Behaviour Inventory (PBI) and Ypsilanti Rating Scale (YRS), which can be subdivided into 4 sub-categories: academic potential, academic motivation, classroom conduct and personal behaviour. Children in NDD schools were rated more highly than children in DD schools on academic potential and academic motivation. The differences in ratings in both cases were significantly different - academic potential ($t=3.13$, $df=351$, $p<0.01$) and academic motivation ($t=2.39$, $df=349$, $p<0.05$).

Table 6.20 Teachers' ratings of children on academic potential and academic motivation by school type

	DD Schools (N=170)	NDD Schools (N=183)
Academic Potential Max. 12		
Mean	8.3	9.1
S.D.	2.44	2.41
Range	3-12	3-12
Academic Motivation Max. 32		
Mean	20.2	21.2
S.D.	4.1	4.0
Range	8-26	8-27

Comparing boys and girls, the findings indicate that teachers rate girls higher than boys in academic potential (not significant) and academic motivation ($t=2.57$, $df=349$, $p<0.05$). Looking at the breakdown within school type, girls in NDD schools received the highest ratings and boys in DD schools, the lowest (see Table 6.21).

Teachers were also asked to rate the children with regard to their classroom conduct and personal behaviour. Overall, children in DD schools were rated as having more problematic classroom conduct than those in NDD schools. The differences in scores between DD schools and NDD schools were significantly different ($t=2.12$, $df=351$, $p<0.05$). Similarly, children in DD schools were rated more negatively on personal behaviour, although only marginally so.

Table 6.22 Teachers' ratings of children on classroom conduct and personal behaviour by school type

	DD Schools (N=170)	NDD Schools (N=183)
Classroom Conduct Max. 28*		
Mean	10.9	10.0
S.D.	4.31	3.67
Range	7-24	7-28
Personal Behaviour Max. 8*		
Mean	2.5	2.3
S.D.	0.92	0.89
Range	2-7	2-8

*The higher the score, the more negative the teachers' rating of classroom conduct and personal behaviour.

Overall, boys were rated as having more classroom conduct problems than girls ($t=2.42$, $df=345$, $p<0.05$). Teachers rated boys marginally more negatively than girls on personal behaviour. In examining the breakdown between gender within the school type, the findings indicate that boys in DD schools were rated most negatively with regard to classroom conduct than all other groups (see Table 6.23).

Table 6.21 Teachers' ratings of children on academic potential and academic motivation by school type and gender

	DD Schools (N=170)			NDD Schools (N=187)			Maximum Score Possible
	Boys	Girls	Overall	Boys	Girls	Overall	
Academic Potential	7.9	8.8	8.3	9.1	9.3	9.1	12
Academic Motivation	19.4	20.8	20.2	20.8	21.7	21.2	3.2

Table 6.23 Teachers' ratings of children on classroom conduct and personal behaviour by school type and gender

	DD Schools (N=170)			NDD Schools (N=187)			Maximum Score Possible
	Boys	Girls	Overall	Boys	Girls	Overall	
Classroom Conduct*	11.5	10.3	10.9	10.4	9.4	10.0	28
Personal Behaviour*	2.5	2.4	2.5	2.4	2.3	2.3	8

*The higher the score, the more negative the teachers' rating of classroom conduct and personal behaviour.

The final element of the socio-emotional status was the locus of control measure administered to children. This scale is scored in terms of the total number of responses in the direction of internal control – the maximum possible score being 13 points. Scores across DD and NDD schools were quite similar. The difference of 0.4 of a point in favour of children in NDD schools was statistically significant ($t=1.99$, $df=370$, $p<0.05$). The mid-score of 7 (i.e. neither a strong internal or external locus of control) achieved by the children in the study would seem to be in agreement with the international research in this area (Eccles et al. (1998). Comparing boys and girls, overall boys scored higher than girls (7.7 compared to 7.3) ($t=2.39$, $df=369$, $p<0.05$).

Table 6.24 Child locus of control by school type

	DD Schools (N=174)	NDD Schools (N=198)
Mean	7.3	7.7
SD	1.78	1.89
Range	3-11	3-12

Table 6.25 Child locus of control by school type and gender

	DD Schools (N=174)		NDD Schools (N=198)	
	Boys	Girls	Boys	Girls
Mean	7.5	7.1	7.9	7.4
S.D.	1.91	1.62	1.96	1.78
Range	3-11	3-11	3-12	3-12

Table 6.26 Summary table indicating where differences in means were statistically significant

Measure	DD v NDD	Boys v Girls Overall	DD Schools Boys v Girls	NDD Schools Boys v Girls
Cognitive Development	*		*	
Language Development	*			
Mathematics	*			*
Reading Comprehension	*		*	*
Science	*	*		*
Perceived Social Competence				
Locus of Control	*	*		

6.5 Discussion

One of the key research questions posed at the outset of this study was whether there was a difference in the developmental status of the participating children attending DD schools and NDD schools. The findings indicate that overall children attending DD schools scored lower in cognitive development, language development, mathematics, reading comprehension and science than their counterparts in NDD schools but higher in perceived competence and social acceptance. These findings reflect the national and international pattern of lower academic achievement disproportionately experienced by children who are disadvantaged (Garbarino, 1992; Kellaghan et al. 1995). They also demonstrate that the gap in achievement between children in advantaged and disadvantaged backgrounds is in evidence from an early age.

The lower achievement of pupils in DD schools in reading is in agreement with the findings of Mc Donald's (1998) research, which also found significant differences in the reading ability between first class (6-7 year old) children in DD and NDD schools. All of the DD schools in the IEA Preprimary Project were part of the Scheme of Assistance to Schools in Designated Areas of Disadvantage and five participating schools became part of the Breaking the Cycle scheme (see Section 2.5). It will be interesting to compare these findings with those of the final evaluation report of the Breaking the Cycle Scheme, due to be published in 2001, which aimed to combat educational disadvantage by giving pupil:teacher ratios of 1:15 and additional capitation and cash grants for special projects.

A second question posed at the outset of this study was whether there was a difference between the developmental status of boys and girls. On examination of the differences in achievement between boys and girls in DD and NDD schools, it became apparent that the boys in DD schools seem to be particularly disadvantaged, scoring lower than both the girls in the DD schools (in some cases their class mates), and the boys and girls in NDD schools. This finding was consistent across all developmental areas, the exception being perceived competence and social acceptance.

This is an important finding, because it suggests that there are a number of factors in operation which are preventing young boys in disadvantaged schools from achieving. There are a number of possible explanations accounting for this. Firstly, based on empirical data, Marcon (1999) has suggested that young boys, particularly from poor SES backgrounds, do not adjust well to didactic approaches, particularly in the earliest years of education. Therefore, it is possible that the more teacher-directed teaching and learning styles evident in the early years of Irish primary schools, as reported on in Hayes et al. (1997), may not be supporting boys' development in DD schools.

Secondly, if, as Fergusson and Horwood (1997) suggest, boys have higher rates of both conduct and attentional problems, this too, may mitigate against school achievement. Teachers in the present study rated boys more negatively than girls on classroom conduct and personal behaviour and the ratings for boys in DD schools were the most negative of all the groups.

Thirdly, Brutsaert et al. (1994) and Elley (1993) both have suggested that boys may be negatively affected by a school environment characterised by a preponderance of female teachers. However, the findings in the present study, that boys in NDD schools achieved the highest scores overall in all areas except social and emotional development, does not seem to be consistent with this theory, given that 90 per cent of the class teachers were female. A factor cited in the international literature to explain the differential achievement rates between boys and girls, particularly in reading, is the differential maturational rates of boys and girls. This may have also been a factor in the present study.

One further factor which may be affecting outcomes is whether or not children were attending mixed schools or single-sex schools. Historically in Ireland, boys and girls have been educated separately, although that trend has been reversed in recent decades. Both types of schools were represented in the sample although the majority of children (68 per cent) attended mixed schools. The percentage of boys attending single sex schools was the same in DD schools and NDD schools (36 per cent in both cases).

The areas where boys in NDD schools showed most advantage, were in mathematics, science, and reading comprehension. Furthermore, the differentials in scoring between boys in DD and NDD schools were large, ranging from 4.2 points in cognitive development, to 5.9 in reading comprehension. The differentials between scoring amongst girls in DD schools and girls in NDD schools, on the other hand, were much smaller. The difference in scoring ranged from just 0.7 of a point in reading comprehension, to 1.6 points in cognitive development. These distinct male and female score distribution patterns are characteristic of developmental outcomes research generally.

When comparing the scores of boys and girls overall however, gender differences are not so clearcut. Overall, girls achieved higher scores in cognitive development and language, but only marginally so. Boys, on the other hand, achieved marginally higher scores in mathematics and science. These findings would seem to be consistent with the recent international research on gender differences summarised by Ruble and Martin (1998). However, with regard to mathematics achievement Ireland had previously been noted as an exception to this trend in the TIMSS study (Mullis et al. 1997) where girls outperformed boys in both 3rd and 4th classes, although only marginally so.

In the literature review, reference was made to the fact that as children move into middle childhood they begin to make more realistic self-evaluations. Thus the findings regarding the perceived competence allow us to assess the self-evaluations of the sample children. A number of findings are worthy of comment. Firstly, overall teachers rate the children's cognitive competence lower than either the children's rating of themselves, and the parent's rating of their children. This was the case for both boys and girls, and for DD and NDD schools. Secondly, teachers in both NDD and DD schools rate girls higher than boys on cognitive competence. This is interesting in the light of the finding that girls in NDD schools were not

achieving as well as the boys in NDD schools on most of the developmental areas assessed. Thirdly, there was no difference in parents' ratings of boys and girls in NDD schools. However, girls in DD schools received the highest rating of cognitive competence from their parents. This finding is important in the light of Eccles et al.'s (1998) observation of the importance of parental approval for self-esteem and may partly explain why girls in DD schools do not appear to be as disadvantaged as boys. However, no data was collected regarding if or how parents communicated approval to their children.

The area of social and emotional development is an interesting one in this study, as it is the area which stands apart from all the others where children in DD schools were achieving marginally higher scores than children in NDD schools. Social and emotional development was measured from the perspectives of the child, the class teacher and the parent. On the child measure, which focused on perceived competence in terms of peer acceptance, cognitive competence and maternal acceptance, children in DD schools scored higher than children in NDD schools, although the difference was not significant. Noteworthy too, is the fact that it is the boys in DD schools who scored highest of all on this measure although the differences are minimal (see Table 6.15). The perceived competence sub-category showing the greatest difference between DD and NDD schools was peer acceptance with a two point differential between DD and NDD children in favour of DD schools. Furthermore, the area of peer acceptance was the area where teachers and children most closely matched in their ratings, suggesting that class teachers have a good understanding of the peer relationships among the children in their class.

In summary, the findings presented in this chapter raise as many questions as they answer. Further analysis for example, is required to explain the larger differentials between boys' achievement in DD and NDD schools. While findings in Section 4.3.5 demonstrate higher expectations amongst parents for children's educational achievement in NDD schools, it would be important to investigate whether there were different expectations for boys and girls amongst parents.

6.6 Summary

- Children attending DD schools scored lower in cognitive development, language development, mathematics, reading comprehension and science than children attending NDD schools. The difference in scoring in all areas was statistically significant.
- Children attending DD schools scored higher than those attending NDD schools in perceived competence and social acceptance.
- Overall, girls scored higher than boys, although only marginally so, in cognitive development, language development, and reading comprehension.
- Boys scored higher than girls overall, in mathematics and science.
- Boys attending DD schools scored lower than any other group on all measures except perceived competence and social acceptance where their scores were similar to other groups. Boys attending NDD schools scored highest on all measures except perceived competence and social acceptance.
- Overall teachers rated the children's cognitive competence lower than either the children's ratings of themselves, and the parents rating of their children.
- Teachers in both DD and NDD schools rate girls higher than boys on cognitive competence.
- Girls in DD schools received the highest rating of cognitive competence from their parents.
- Teachers and children matched most closely in their ratings in the area of peer acceptance suggesting that teachers have a good understanding of the peer relationships among the children in their class.
- Teachers rated boys more negatively than girls in classroom conduct and personal behaviour. Boys in DD schools were rated more negatively in these areas than any other group.
- Teachers rated girls higher than boys in academic motivation and academic achievement.

Chapter 7

Conclusions & Recommendations

Conclusions & Recommendations

The social and economic context within which the data for this report was collected was characterised by strong economic development and increased policy attention to the needs and rights of young children. In 1997/98, the unemployment level was falling and the Irish economy was growing at a faster rate than any other European economy. Notwithstanding this, there was still concern about the high level of poverty among certain groups, particularly children. The campaign to combat educational disadvantage was strengthened by new initiatives. However, the majority were limited to the designated disadvantaged sector and were pilot in nature. The publication, in 2000, of the *National Children's Strategy* marked an important policy development for all children in Ireland and has created a climate of increased interest in children among policy makers.

7.1 The IEA Preprimary Project

This report on Phase 3 of the Irish element of the IEA Preprimary Project presents data which will inform policy development, particularly in the area of education. The IEA project is a large cross-national investigation into the years prior to a child's entry into compulsory education (age six in Ireland) and the period of transition into the primary school. The project was designed to assess the need for, and the utilisation of, early childhood care and education, the quality of the child's experiences in these settings and the growing role that various care and educational arrangements play in the development of the world's young children. Ireland joined the project in 1994 when data on 396 four-year-old children and their families was gathered. These children and their families were again contacted in 1997/98 when the children were aged seven years. The children and their families continue to be tracked and it is hoped to study the children again when they are making the transition from first year to second year at secondary school. The longitudinal nature of this study, its design and the 94 per cent follow-up rate with the original sample makes it unique in Irish educational research.

Drawing on the ecological model of development proposed by Bronfenbrenner (1979; 1992), the project was designed to describe the experiences of children at age four and seven years, with a view to exploring the complex interactions between the child, the family, the teacher and the environment. The ecological model gave voice to the reality that the individual learner's experience is linked to interactions with, and between the learning environments, whether that environment is the home, the preschool, the school or wider society.

7.2 Specific questions addressed by this study

This aspect of the IEA Preprimary Project was designed to answer a number of specific questions. These included:

- What expectations do parents of seven-year-olds have for their child's educational future?
- Were there major changes in the participating families lives which had affected them and the lives of their seven-year-olds children since they were last interviewed?
- What were the family characteristics of the sample children?
- How do teachers of seven-year-olds plan and organise the curricular experience for the children they teach?
- What is the developmental status of the sample of children?
- Is there a difference in developmental status between children attending designated disadvantaged schools and non-designated schools?
- Is there a difference in developmental status between boys and girls at age seven years?

This report has presented data on the developmental status and school experience of a nation-wide sample of 374 seven-year-old children. It describes family background factors and identifies major changes in the health status and family structure that occurred between 1994/95 and 1997/98. In particular, the report describes the developmental status of the sample of children at age seven and highlights the differences between children attending designated disadvantaged (DD) school and non-designated (NDD) schools and between boys and girls. The study focused on the curricular experiences of children and did not examine, for example, life in the playground. Neither did the study examine the more qualitative aspects of school life such as home, school and class relationships, interactions and classroom climate. In addition, the report presents details of family characteristics, parent and teacher expectations for the sample of children and the characteristics of participating teachers.

7.3 Children and their families

Results from this study indicate that the majority of the sample children were living in traditional, two parent families. Eighty nine per cent of mothers interviewed were married at the time of data collection and, of this sample, 93 per cent were living with a spouse. Twelve per cent of parents identified a significant change in the health status of their children during the period 1995/1998 and 40 per cent reported a significant change in family structure. Reported changes in family structure included the birth of a sibling, the death of a grandparent, parent separation.

Twenty four per cent of the total sample of parents interviewed reported that their children had experienced some level of emotional upset since age four. Of this group, 29 per cent were parents of children attending DD schools and 19 per cent were parents of children attending NDD schools. Most of the reported periods of emotional upset were brief but a total of 35 per cent of children attending DD schools were reported to be still affected by emotional upset with a corresponding figure of 24 per cent for those attending NDD schools. While this study did not explore this issue of emotional distress in any detail, some indication of the causes was received from parents and included various levels of bullying and the stresses associated with separation. Given the level of reported emotional upset in this sample of Irish seven-year-olds, it is clear that further research is needed to identify the level of emotional upset and its impact on children, the factors causing stress and the processes for supporting children and their families as necessary.

Ninety per cent of the sample children had attended some form of early childhood education prior to their entry into primary school. Given the design of this study – in which half the original sample was selected while attending early childhood education settings – one needs to be cautious in interpreting this finding. What is of interest is the slight difference in the pattern of use. There has been a significant rise in investment in early childhood services since the data for this study was collected. This is an area where further research is needed to establish what choice parents have, what types of service parents most value for their children, and how this differs as children grow and develop.

The average age for entry into school was 4 years and 7 months with children attending DD schools starting, on average, two months earlier than their counterparts in NDD schools. This finding is one that warrants further investigation particularly in the light of our overall finding that children attending NDD schools outperform their counterparts attending DD schools on all but one measure of developmental status. School effectiveness research has identified both classroom factors and individual factors, such as age, social class and ethnic background, as contributing to variations found (Gray et al., 1996).

Parents of children attending NDD schools had remained in full-time education for two years longer than parents of children in DD schools. This finding is consistent with our data from the first round of family interviews and affords a measure of the reliability of the methodology. In the light of the positive economic changes in Ireland over the period of this study, it is no surprise to find that more parents were employed in 1997/98 than in 1994/95. Fifty one per cent of the total sample of mothers and 81 per cent of the sample of fathers were in paid employment. Further analysis shows that 56 per cent of mothers of children attending NDD schools were employed compared to 46 per cent of mothers of children in DD schools. For fathers, the figures were 91 per cent and 67 per cent respectively. General income details were gathered in this study and the data show that the difference in average incomes for the two groups is greater, in real terms, in this study than in the 1994/95 study. As this study did not examine aspects of employment and income in detail, it is not possible to generalise from these findings. However, the result supports the findings reported by the ESRI of widening relative income gaps (ERSI, 2001).

The parents of the sample children were asked what level of education they would like their children to complete and what level they thought they would complete. Overall a majority of parents would like their children to complete third level education. Eighty-six per cent of parents with children attending NDD schools compared to 70 per cent of parents with children attending DD schools would like their children to complete third level. However, a smaller sample, 72 per cent and 55 per cent respectively, felt they would actually achieve this level.

7.4 The classroom experience

The teachers in this study were predominantly female (90 per cent). When the sample were aged four years, all participating teachers in the study were female. This is an aspect of early and primary education that deserves further study particularly in the light of research which suggests that primary school boys may be negatively affected by a school environment characterised by a preponderance of female teachers (Elley, 1993; Brutsaert & Bracke, 1994). While the findings of this study do not show a causal relationship in this regard, they do indicate that boys attending DD schools fare less well than any other group of children.

All participating teachers had a teaching qualification with 71 per cent having a basic degree and 6 per cent a degree at Masters level. Teachers had, on average, completed fifteen years teaching for those in DD schools and eighteen years for those in NDD schools. The study finds that most teachers teach alone in their classrooms with only 8 per cent of classrooms reporting a second adult.

The pupil-teacher ratio in the sample was 24:1 for children attending DD schools and 30:1 for children attending NDD schools. This study was interested in gathering data from children aged seven years rather than from children in a particular class. In the follow up of the original sample, the study found that 67 per cent of the children were in first class and 32 per cent in second class. The remainder were in senior infants. This is an important point to bear in mind when interpreting developmental findings in the academic skills area, as those children in second class had been introduced to more advanced levels of academics than their first class peers.

In terms of children's school experience, this study only sought details on time allocated by teachers in respect of curricular subjects: it did not collect details on the time allowed for playground play or break time. The content of the curriculum subjects taught at primary school is prescribed nationally through the *Primary School Curriculum*. The Department of Education and Science, through the inspectorate, recommend time allocation for different subject areas. This study found that most of children's time in school – 65 per cent - was spent in the three core areas of the curriculum: Irish, English and Mathematics. The reported time allocated to Irish (21 per cent) and Mathematics (16 per cent) coincide with the Department of Education and Science recommendations. However, the time reported spent on English (28 per cent) is higher than that recommended by the departmental inspectors (17 per cent) and has impacted on other curricular areas. Specifically, this has led to a decrease in time allocated to Social & Environmental Studies (7 per cent) and Arts and Crafts (7 per cent) over that recommended, 15 per cent and 11 per cent respectively. The study found that children attending DD schools spend less time than their counterparts in NDD schools on Irish, slightly less on Mathematics and more time on English. There was no significant difference found across other curricular areas.

The study found that equipment levels were the same for both groups of schools. Sixty-three per cent of teachers in NDD schools reported that computers were available to their class, the corresponding figure for DD schools was 58 per cent. The findings reported refer to the reports of teachers in respect of the 1971 *Primary School Curriculum*. A revised primary curriculum was published in 1999 and is now being introduced on a phased basis into Irish primary schools. It will be interesting to replicate this aspect of the study to assess the impact of the revised curriculum on teacher practice and children's classroom experience.

How parental involvement impacts on children's learning is complex, with some studies questioning its influence on academic outcomes (Reynolds, 1992; White, Taylor & Moss, 1992). Other studies have found a positive impact on young children's achievement, particularly children considered at risk of educational failure (Ferri & Saunders, 1991; Schweinhart & Weikart, 1997; Leseman, 1998). Neither parental views, nor those of children, were sought with respect to the level of parental involvement. This is an aspect of parental involvement, particularly the views of children, that does need further exploration. The issue was, however, explored with participating teachers. The majority of teachers reported some parental involvement. The most frequent type of involvement identified was 'helping with homework' (93 per cent of teachers) followed by 'assisting with fundraising' (92 per cent of teachers) and 'attending meetings' (89 per cent). More teachers in DD schools reported parental involvement in 'reading to children' (62 per cent of teachers) when compared to teachers in NDD (55 per cent). The study sought no measure of the actual level or degree of involvement of parents. However, it did find a high rate of parental involvement reported by teachers. In the light of conflicting data from international research on the effectiveness of parental involvement, it is recommended that a comprehensive study of parental involvement, at both early and primary education in Ireland, be commissioned to establish current theory and practice in this regard.

7.5 Developmental status of participating children

The developmental status of the participating children was determined through the administration of a number of measures in the areas of cognitive development, language development, social/emotional development and academic achievement. This latter measure was subdivided into three section covering mathematics, reading comprehension and science.

The findings reported show a statistically significant difference in performance on all measures in favour of children attending NDD schools when compared to those attending DD schools. The situation is not so clear cut when the data is analysed in terms of gender and school setting. For instance, girls scored higher than boys in cognitive development, language development and reading comprehension and boys scored higher than girls in mathematics and science. Boys attending NDD schools scored highest of all on all measures as a group apart from two sub-categories of social/emotional development: perceived competence and social acceptance. Boys attending DD schools scored lowest on all measures with the exception of the two sub-categories of social/emotional development: perceived competence and social acceptance, where they scored marginally higher than any group. In addition, greater variation was found in the scores of children in DD schools, on both

cognitive and language measures when compared to those of children in NDD schools. The relatively low scores achieved by all groups on the mathematics element of the academic measure, may be accounted for by the fact that 8 of the 16 number operation items presented involved processes introduced formally in second rather than first class. The majority of the sample was in first class at the time of data collection. There are a number of issues worth further investigation arising from these findings. For instance, what factors contribute to the finding that the boys in this sample attending NDD schools outperformed all other groups on most developmental status measures studied while their male counterparts, attending DD schools, perform significantly below all groups.

Teachers and parents were asked to rate children's developmental status. There was no difference in parents' ratings of boys and girls attending NDD schools. However, girls in DD schools received a higher rating on cognitive competence from their parents than did boys. Teachers rated all children lower on cognitive competence than parents and than children themselves. Teachers rated girls higher than boys on cognitive competence in both DD and NDD schools. On peer acceptance the ratings of teachers and children matched most closely.

7.6 Conclusions and recommendations

The results from this study broaden our understanding of the experience of children attending primary school in Ireland. A primary aim of the study was to study the differences, if any, between children attending designated schools and their peers attending non-designated schools. Although not a study of economic circumstances, the study confirms that children attending designated disadvantaged schools are in households with a low average annual income. The findings indicate that the income differential between the two groups of families grew between 1994/95 and 1997/98.

The study provides the first published data, using a nation-wide sample, on curricular organisation and the allocation of class time by teachers. The study also highlights a variety of differences between DD schools and those not so designated. The DD schools were all in receipt of additional departmental funds and preferential pupil teacher ratios. Notwithstanding these advantages, this study found a statistically significant difference between the developmental status of children attending DD schools and those attending NDD schools in favour of the latter. As there is no baseline data for developmental status of seven year olds against which to compare the data from this study, it is difficult to judge whether or not the gap between the groups has narrowed as a result of departmental intervention. It is recommended that a study of seven-year-olds in similar settings be undertaken, so that the impact of consolidated support for DD schools on children can be evaluated. This study could provide the baseline against which to judge the impact of investment in the classroom experience.

This study also highlights the fact that developmental status is influenced by a wide variety of factors, and not just classroom experience. In many ways, the findings of this study simply confirm international research. While in simple terms those children attending NDD schools out performed their peers in DD schools, the situation was more complex when a more extensive analysis of data was carried out. Further analysis is needed to account for the large differentials between boys' achievement in DD and NDD schools. What does the slight advantage that boys attending DD show over their peers in NDD schools in perceived competence and self-acceptance mean? To what extent, if at all, does the higher level of emotional upset in children attending DD schools, reported by families, impact on their developmental status? Is the predominance of female teachers a factor that should be considered? Is the high reported level of parental involvement effective?

The study found a difference in the time allocated for Irish and English across the two school groups with more time allocated to English (30 per cent) than to Irish (19 per cent) in DD schools. On other subject areas there was a strong consistency across all classrooms in the organisation of time. The discrepancy between the recommended time allocation for English (17 per cent) and that reported (28 per cent) is noteworthy, particularly in that it seems to take time from the areas of Art and Crafts and Social and Environmental Studies. The findings in this study refer to the 1971 *Primary School Curriculum*. The publication of the revised *Primary School Curriculum* may lead to alterations in time allocation and subject organisation. It would be valuable to carry out a study of the way teachers organise the time allocation for different subjects for children in first and second class under the revised Curriculum. Comparing the results with those of this study would be a measure of the impact of the revised Curriculum and would facilitate debate about how best to organise time for maximum effect with seven-year-olds.

Some of the issues raised in this report, particularly in relation to the interactions between factors and the impact on developmental status and school achievement, will be explored in further analysis of the Phase 2 and Phase 3 data by the research team at the DIT. The International Co-ordinating Committee (ICC) is also completing cross-national analyses which will allow for consideration of how the experiences of Irish seven-year-olds at school compare with their peers in other countries.

The findings presented in this report suggest additional opportunities for research. These include:

- A study to identify the level of emotional upset, and its impact, on young children, the factors causing stress and the processes for supporting children and their families as necessary.
- A study to establish what choice parents have with regard to early educational services, what types of service parents most value for their children and how this differs as children grow and develop.
- A study to investigate how the widening relative income gap is impacting on families with young children and how this, in turn, is affecting their school achievement. classrooms in the organisation of time.
- A replication of aspects of this study investigating the organisation and allocation of class time to assess how the introduction of the revised *Primary School Curriculum* is impacting on teacher practice and children's classroom experiences.
- A comprehensive study to establish current theory and practice with respect to parental involvement, at both early and primary education in Ireland.
- A study to identify what factors contribute to the finding that the boys in this sample attending NDD schools outperformed all other groups on most developmental status measures studied while their male counterparts, attending DD schools, perform significantly below all groups.

References

References

Achenbach, T.M., Howell, C.T., Quay, C.T. & Conners, C.K. (1991) *National survey of problems and competencies among four to sixteen year olds: parents' reports from normative and clinical samples.* Monographs of the Society for Research in Child Development, 56, Serial no. 225.

Alexander, K.L., Dauber, S.L. & Entwisle, D.R. (1993) First-grade classroom behaviour: Its short-and long-term consequences for school performance. *Child Development*, 64, pp. 801-803.

Anning, A. (1998) Early childhood curriculum in the UK: Some research evidence. *International Journal of Early Years Education*, 6,3, pp.299-314.

Area Development Management Ltd (1999) *Preventative Education Strategies to Counter Educational Disadvantage.* Insights No. 10, Dublin: ADM.

Athey, C. (1990) *ExtendingThought in Young Children: a Parent-Teacher Partnership.* London: Paul Chapman Publishing.

Ball, C. (1994) Start Right: *The Importance of Early Learning.* London: RSA.

Bandura, A. (1994) *Self-efficacy: The Exercise of Control.* New York: Freeman.

Blatchford, P. Goldstein, H. & Mortimore, P. (1998) Research on class size effects: a critique of methods and a way forward. *International Journal of Educational Research*, 29, pp. 691-710.

Blenkin, G. & Kelly, V. (1996) Education as development. In G. Blenkin & V. Kelly (Eds.) *Early Childhood Education: a Developmental Curriculum.* London: Paul Chapman.

Blenkin, G. & Whitehead, M. (1996) Creating a context for development. In G. Blenkin & V. Kelly (Eds.) *Early Childhood Education: a Developmental Curriculum.* London: Paul Chapman.

Boldt, S. & Devine, B. (1998) Educational disadvantage in Ireland: Literature review and summary report. *In Educational Disadvantage and Early School-Leaving.* Dublin: Combat Poverty Agency.

Brazelton, T. B. (1992) *Heart Start: The Emotional Foundations of School Readiness.* Arlington, VA: National Center for Clinical Infant Programmes.

Bronfenbrenner, U. (1979) *The Ecology of Human Development: Experiments by Nature and Design.* Cambridge, Mass: Harvard University Press.

Bronfenbrenner, U. (1986) Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22,6. pp.723-742.

Bronfenbrenner, U. (1992) Ecological systems theory. In R. Vasta (Ed.) *Six Theories of Child Development: Revised formulations and current issues.* London: Jessica Kindsley Publishers.

Bronfenbrenner, U. (1995) Development ecology through space and time: A future perspective in P. Moen, G.H. Elder, Jr. & Luscher (Eds.) *Examining Lives in Context: perspectives on the Ecology of human development* pp.619-647.

Brutsaert, H. & Bracke, P. (1994) Gender Context of the Elementary School: sex differences in affective outcomes. *Educational Studies*, 20,1 pp. 3-11.

Burchinall, M.R., Ramey, S., Reid, M.K. & Jaccard, J. (1995) Early childcare experiences and their association with family and child characteristics during middle childhood. *Early Childhood Research Quarterly*, 10, pp.33-61.

Byrne, D. (1999) Address by the then Attorney General to DIT Conference on Divorce, April 24, 1999 in G. Shannon (Ed.) (1999) *The Divorce Act in Practice.* Dublin: Round Table Ltd.

Callan, T., Layte, R., Nolan, B., Watson, D., Whelan, C., Williams, J. & Maitre, B. (1999) *Monitoring Poverty Trends: Data from the 1997 Living in Ireland Survey.* Dublin: The Stationery Office and The Combat Poverty Agency.

Central Statistics Office (1999) *Census 1996.*

Central Statistics Office (2000a) *Labour Force Statistics.*

Central Statistics Office (2000b) *Vital Statistics.*

Children's Rights Alliance (1998) *Children's Rights: Our Responsibilities*, Concluding Observations of the U.N. Committee on the Rights of the Child following Examination of the First National Report of Ireland on the Implementation of the Convention on the Rights of the Child, Dublin: CRA.

Clancy, P. (1996) Investment in education the equality perspective: Progress and possibilities. *Administration*, 44, 3, pp.28-41.

Commission on the Family (1998) *Strengthening Families for Life: Final Report of the Commission on the Family to the Minister for Social, Community and Family Affairs.* Dublin: The Stationery Office.

Coolahan, J. (Ed) (1998) *Report of the National Forum for Early Childhood Education*. Dublin: The Stationery Office.

Coulby, J.& Coulby, D. (1990) Intervening in junior classrooms. In J. Docking (Ed.) *Alienation in the Junior School*. Lewes: Falmer Press.

Crahay, M. (1990) Which research paradigm for the IEA longitudinal study? Unpublished paper. Department of Psychology & Education, University of Liege, Belgium.

Dahlberg, G., Moss, P. & Pence, A. (1999) *Beyond Quality in Early Childhood Care and Education: Post-modern Perspectives*. London: Falmer Press.

Department of Education (1971) *Primary School Curriculum, Handbook for Teachers*. Dublin: The Stationery Office.

Department of Education (1995) *Charting our Education Future: White Paper on Education*. Dublin: The Stationery Office.

Department of Education & Science (1999) *Department of Education & Science Statistics*.

Devine, D. (1998) Structure, Agency and the Exercise of Power in Children's Experience of School. Unpublished PhD Thesis, National University of Ireland, Dublin.

Devine, D. (2000) Constructions of childhood in school: power, policy and practice in Irish education. *International Studies in Sociology of Education*, 10,1, pp.23-41.

Devine, D. & Swan, D. (1997) School Effectiveness in Irish Primary Schools: Unpublished Report of the International School Effectiveness Research Project - The Irish Study.

Donaldson, M., Grieve, R. & Pratt, C. (1983) *Early Childhood Development and Education: Readings on Psychology*. Oxford: Basil Blackwell.

Drew, E. (1998) Re-conceptualising families. In E. Drew, R. Emerek, & E. Mahon (Eds.) *Women, Work and the Family in Europe*. London: Routledge.

Drudy, S. & Uí Chatháin, M. (1998) Gender differences in classroom interaction in a second level context. *Irish Educational Studies*, 17.

Duncan, G. J. Brooks-Gunn, J. and Klebanov, P.K. (1994) Economic deprivation and early childhood development. *Child Development*, 65, pp.296-318.

Dweck, C.S. & Leggett, E (1988) A social-cognitive approach to motivation and personality. *Psychological Review*, 95, pp.256-273.

Eccles, J.S., Wigfield, A. & Schiefele, U. (1998) Motivation to succeed. In N. Eisenberg (Volume Ed.) *Social, Emotional, and Personality Development, Handbook of Child Psychology, Fifth Edition*, (Volume Three, pp. 1017-1096) New York: John Wiley & Sons, Inc.

Educational Research Centre (1998) Early Start Pre-school Programme: Final Evaluation Report. Unpublished Report.

Edwards, R. & David, M. (1997) Where are the children in home-school relations? Notes towards a research agenda. *Children & Society*, 11, 3.

Edwards, R. & Alldred, P. (2000) Children's understandings of home-school relations. *Education* 3-13, pp.41-45.

Egeland, B. (1997) Risk and Resiliance in Infants and Young Children, Paper presented at the Annual Meeting of the American Psychological Association, Chicago, 15-19 August 1997.

Eisenberg, N. (1998) Introduction, Chapter 1 in N. Eisenberg (Volume Ed.) *Social, Emotional, and Personality Development, Handbook of Child Psychology, Fifth Edition*, (Volume Three, pp. 1-24) New York: John Wiley & Sons, Inc.

Elley, W.B. (1992) *How in the World do Students Read? IEA Study of Reading Literacy*. The Hague: The International Association for the Evaluation of Educational Achievement.

Elliott, E. and Dweck, C.S. (1988) Goals: an approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54,1, pp.5-12.

Entwistle, N. (1988) *Styles of Learning and Teaching: An Integrated Outline of Educational Psychology for Student Teachers and Lecturers*. London: David Fulton.

Fahey, T. (1998) Family Policy in Ireland, A Strategic Overview. In *Strengthening Families for Life: Final Report of the Commission of the Family to the Minister for Social, Community and Family Affairs*, Dublin: The Stationery Office.

Fergusson, D.M. and Horwood, L.J. (1997) Gender differences in educational achievement in a New Zealand birth cohort. *New Zealand Journal of Educational Studies*, 32,1 pp. 83-96.

Ferri, E. & Saunders, A. (1991) Parents, *Professionals and Pre-School Centres: A Study of Barnardo's Provision*. London: National Children's Bureau.

Forssen, K. (2000) *Child Poverty in the Nordic Countries*. University of Turku, Department of Social Policy Series, B:22/2000.

Garbarino, J. (1992) The meaning of poverty in the world of children. *American Behavioral Scientist*, 35,3. pp.220-237.

Garbarino, J. (1993) Childhood: what do we need to know? *Childhood*, 1, pp.3-10.

Gottfried, A.E., Balthurst, K. and Gottfried, A.W. (1994), Role of maternal and dual-earner employment status in children's development. In A.E. Gottfried & A.W. Gottfried (Eds.) *Redefining Families: Implications for Children's Development*, New York: Plenum Press.

Gottfried, A.E. & Gottfried, A.W. (Eds.)(1994) *Redefining Families: Implications for Children's Development*, New York: Plenum Press.

Government of Ireland (1990), *Report of the Primary Education Review Body*, Dublin: Stationery Office.

Government of Ireland (1997) *Sharing In Progress: National Anti-Poverty Strategy*, Dublin: Stationery Office.

Government of Ireland (1999) *Primary School Curriculum*. Dublin: The Stationery Office.

Gray, J., Reynolds, D., Fitz Gibbon, C. & Jesson, D. (Eds.) *Merging Traditions: The Future of Research on School Effectiveness and School Improvement*. London: Cassell.

Green, A. (1996) *Education, Globalization and the National State*, London: Maxmillan.

Grotberg,E. (1995) *The International Resilience Project: Promoting resilience in children*. ERIC ED 383424.

Harter, S. (1998) The Development of Self-Representations. In N. Eisenberg (Volume Ed.) *Social, Emotional, and Personality Development, Handbook of Child Psychology, Fifth Edition*, (Volume Three, pp. 553-618) New York: John Wiley & Sons, Inc.

Harvey, E. (1999) Short-Term and Long-term effects of early parental employment on children of the National Longitudinal Survey of Youth. *Developmental Psychology*, 35,2, pp.445-459.

Hayes, N. (1995) *The Case for a National Policy on Early Education*. Poverty & policy discussion paper No. 2. Dublin: Combat Poverty Agency.

Hayes, N. (1999) *Partnership in curriculum development* in Proceedings of Enhancing Quality in the Early Years Conference, 19th & 20th November, Clontarf Castle Hotel, Dublin.

Hayes, N. (forthcoming) Early childhood education and cognitive development at age 7 years. Irish Journal of Psychology Special Issue (Child Development).

Hayes, N., O'Flaherty, J. & Kernan, M. (1997) *A Window on Early Education in Ireland: The First National Report of the IEA Preprimary Project*. Dublin: Dublin Institute of Technology.

Horgan, R. (1999) Divorce: the Irish Experience. In G. Shannon (Ed.) *The Divorce Act in Practice*. Dublin: Round Table Ltd.

Huston, A.C., Mc Loyd, V.C. & Garcia Coll, C. (1997) Poverty and Behavior: the case for multiple methods and levels of analysis. *Developmental Review*, 17, 3, pp. 376-393.

Irish National Teachers' Organisation (1997) *Parental Involvement: Possibilities for Partnership*, Dublin: INTO.

Irish National Teachers' Organisation (1995) *Early Childhood Education: Issues and concerns*. Dublin: INTO.

Kagitcibasi, C. (1994) Perspectives on the IEA Preprimary Project. In P. Olmsted & D. Weikart (Eds.) (1994). *Families Speak: Early Childhood Care and Education in 11 Countries, IEA Primary Project Phase 1*, Michigan: High/Scope Press.

Katz, L.J. (1995) *Talks with Teachers of Young Children: A Collection*. NJ: Ablex Publishing Corporation.

Keating, I. & Taylorson, D.E. (1996) The other mum's army: issues of parental involvement in early education. *Early Years*, 17,1.

Kellaghan, T., Weir, S., Ó hÚallacháin, S. & Morgan, M. (1995) *Educational Disadvantage in Ireland*. Dublin: Department of Education and Combat Poverty Agency and Educational Research Centre.

Kellaghan, T., Sloane, K., Alvarez, B. & Bloom, B.S. (1993) *The Home Environment and School Learning: Promoting Parental Involvement in the Education of Children*. San Francisco: Jossey-Bass.

Kernan, M. (2000) Early Education in Ireland: Emerging Policy. *Irish Educational Studies*, 19.

Kyriacou, C. (1994) *Essential Teaching Skills*. London: Simon & Schuster.

Lamb, M. (1997) Fathers and child development: an introductory overview and guide. In M. Lamb (Ed.) *The Role of the Father in Child Development*. John Wiley & Sons.

Layte, R., Maitre, B. Nolan, B., Watson, D., Whelan, C., Williams, J. & Casey, B. (2001) *Monitoring Poverty Trends and Exploring Poverty Dynamics in Ireland*. Policy Research Series, No. 41. Dublin: Economic and Social Research Institute.

Leggett, E. L. and Dweck, C.S. (1986) Goals and inference rules: Sources of causal judgements. *Psychological Review*, 95,2. pp.256-273.

Leseman, P. (1998) Effective early education for children at risk: timing, intensity, pedagogy, Paper presented to the Expert Conference Early Childhood Education, Utrecht, April 21, 1998.

Lonigan, C.J. & Whitehurst, G,J. (1998) Relative efficacy of parent and teacher involvement in a shared-reading intervention for preschool children from low-income backgrounds. *Early Childhood Research Quarterly*, 13,2, pp. 263-290.

Marcon, R. (1993) Socioemotional versus academic emphasis: Impact on Kindergartners' development and achievement, *Early Child Development and Care*, 96, pp. 81-91.

Marcon, R. (1999) Differential impact of pre-school models on development and early learning of inner-city children: a three-cohort study, *Developmental Psychology*, 35, 2, pp. 358-375.

Martin, M. (1997) *Discipline in schools: Report to the Minister for Education*, Niamh Breathnach, T.D. Dublin: The Stationery Office.

Martin M.O. & Morgan, M. (1994), Reading literacy in Irish schools: a comparative analysis. *Irish Journal of Education*, Special Edition, 28.

Martin, M., Mullis, I., Beaton, A., Gonzalez, E., Smith, T., Kelly, D. (1997) Science *Achievement in the Primary Years, IEA Third International Mathematics and Science Study*, Boston College, Chestnut Hill, MA: TIMSS International Study Center.

Mc Carthy, P. & Boyle, C. (1986) Prevalence of behavioural maladjustment in a social cross-section of Irish urban school children. *Irish Medical Journal*, 79, 5.

Mc Donald, E. (1998) Reading Achievement and Educational Disadvantage. *Irish Educational Studies*, 17, pp. 208-221.

McLoyd, V.C. (1998) Socioeconomic disadvantage and child development. *American Psychologist*, 53, 2, pp. 185-204.

McLoyd, V. C. & Wilson, L. (1991) The strain of living poor: Parenting, social support, and child mental health. In A.C. Huston (Ed.) Children in Poverty: *Child Development and Public Policy*. Cambridge: Cambridge University Press.

Micklewright, J. & Stewart, K. (2000) The *Welfare of Europe's Children: Are EU Member States Converging?* Bristol: The Policy Press in association with UNICEF.

Millar, L. (1997) A vision for the early years curriculum in the United Kingdom. *International Journal of Early Childhood*, 29,1, pp.34-41.

Ministry of Education (1996) *Te Whariki: Early Childhood Curriculum*, Wellington: Learning Media.

Mortimore, P. Sammons, P., Stoll, L., Lewis, D and Ecob, R. (1988) *School Matters: The Junior Years*. Wells: Open Books.

Moyles, J. (1992) *Organising for Learning in The Primary Classroom: A Balanced Approach to Classroom Management*. Open University Press.

Mullis, I, Martin, M., Beaton, A., Gonzalez, E., Kelly, D., Smith, T. (1997) *Mathematics Achievement in the Primary Years, IEA Third International Mathematics and Science Study*, Boston College, Chestnut Hill, MA: TIMSS International Study Center.

Murray, C. (1997) *Pavee Children - A Study on Childcare Issues for Travellers*. Dublin: Pavee Point.

National Centre for Technology in Education (2000) *Innovative ICT Projects in Irish Schools: a catalogue of projects supported by the Schools Integration Project under Schools IT 2000*. Dublin: National Centre for Technology in Education.

National Childcare Strategy (1999) *Report of the Partnership 2000 Expert Working Group on Childcare*. Dublin: The Stationery Office.

National Council for Curriculum and Assessment (1990) *Report of the Review Body on the Primary Curriculum*. Department of Education, Dublin: The Stationery Office.

National Parents' Council Primary (2001) *Working Effectively as a Parent Association: Guidelines for Parent Associations*. Dublin: National Parents Council.

National Research Council (2000) *Eager to Learn: Educating our Preschoolers*. Washington: National Academy Press.

New Zealand Council for Educational Research (1988) Equal opportunity in education for girls and women. *Royal Commission on Social Policy, The April Report*, Vol. III pt.2 Wellington: Government Printer.

Nolan, B. (2000) *Child Poverty in Ireland*. Dublin: Oak Tree Press in Association with Combat Poverty Agency.

Office for Standards in Education (1995) *Class Size and the Quality of Education*, Office of Her Majesty's Chief Inspector of Schools.

Olmsted, P. & Weikart, D. (Eds.) (1989) *How Nations Serve Young Children*. Michigan: The High/Scope Press.

Olmsted, P. & Weikart, D. (Eds.) (1994) *Families speak. Early childhood care and education in 11 countries*. Michigan: The High/Scope Press.

O'Rourke, B. & Archer, P. (1987) A survey of teaching practices in the junior grades of Irish primary schools. *Irish Journal of Education*, 21, 2, pp. 53-79.

Peterson, K.A. & Paulson, S.E. (1997) The influence of maternal employment on students' perceptions of the parenting and teaching factors related to achievement. *Early Child Development and Care*, 135, pp.89-101.

Podmore, V. (1989), Class size: A review of the literature relating to the early years of schooling. In G. Mc Donald, V.N. Podmore, M. Renick, L. Smith, J. Vize & C. Wylie (Eds.) *More Teachers, Fewer Pupils: A Study of the 1:20 Teacher-Pupil Ratio Policy in the Junior School*. Wellington: New Zealand Council for Educational Research.

Podmore, V. N. (1998) Class size in the first years at school: a New Zealand perspective on the international literature. *International Journal of Educational Research*, 29, pp. 711-721.

Pollard, A. & Tann, S. (1993) *Reflective Teaching in the Primary School* (2nd edn.) London: Cassell.

Prior, M., Smart, D., Sanson, A. & Oberklaid, F. (1993) Sex differences in psychological adjustment from infancy to 8 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32, pp.291-304.

Pugh, G. & De'Ath, E. (1989) *Working Towards Partnership in the Early Years*. London: NCB.

Reynolds, A.J. (1992) Comparing measures of parental involvement and their effects on academic achievement in *Early Childhood Research Quarterly*, 7, 441-462.

Rowe, D.C. & Rodgers, J.L. (1997) Poverty and behaviour: A response to a critique of a special issue. *Developmental Review*, 17,3, pp.394-406.

Ruble, D. R. & Martin, C.L. (1998) Gender Development. In N. Eisenberg (Volume Ed.) *Social, Emotional, and Personality Development, Handbook of Child Psychology*, Fifth Edition, (Volume Three, pp. 1-24) New York: John Wiley & Sons, Inc.

Rubin, K.H., Bukowski, W. & Parker J.G. (1998) Peer interactions, relationships, and groups in N. Eisenberg (Volume Ed.) *Social, Emotional, and Personality Development, Handbook of Child Psychology, Fifth Edition*, (Volume Three, pp. 1-24) New York: John Wiley & Sons, Inc.

Rutter, M. (1985) Family and School influences on cognitive development. *Journal of Child Psychology and Psychiatry*, 26, 5, pp.683-704.

Ryan, S. (1994) *Home School Community Liaison Scheme, Final Evaluation Report*. Dublin: Educational Research Centre, St. Patrick's College.

Sammons, P., Mortimore, P. & Thomas, S. (1996) Do schools perform consistently across outcomes and areas? In J. Gray, D. Reynolds, C. Fitz Gibbon & D. Jesson, (Eds.) *Merging Traditions: The Future of Research on School Effectiveness and School Improvement*. London: Cassell.

Schweinhart, L.J. & Weikart, D.P. (1997) *Lasting Differences: The High/Scope Perry Preschool Curriculum Comparison Study Through Age 23*. Monographs of the High/Scope Educational Research Foundation, 12. Ypsilanti, MI: High/Scope Press.

Shannon, G. (1999) *The Divorce Act in Practice*. Dublin: Round Table Ltd.

Sharp, C. Hutchinson, D., & Whetton, C. (1994) How do season of birth and length of schooling affect children's attainment at key stage 1. *Educational Research*, 36,2 pp. 107-121

Shonkoff, J.P. & Phillips, D.A. (Eds.) (2000) *From Neurons to Neighbourhoods: The Science of Early Childhood Development*. Committee on Integrating the Science of Early Childhood Development, Board on Children, Youth and Families.

Singer, E. (1996) Prisoners of the method: Breaking open the child-centred pedagogy in day care centres. *International Journal of Early Years Education*, 4,2 pp.28-40.

Slavin, R.E. (1994) School and classroom organisation in beginning reading: class size, aides and instructional grouping. In R.E. Slavin, N. Karweit and B. Wasik (Eds.) *Preventing Early School Failure: Research, Policy and Practice*. Allyn & Bacon.

Smith, A. (1999) The role of an early childhood curriculum: promoting diversity versus uniformity. Proceedings of Enhancing Quality in the Early Years Conference, 19-20 November 1999. Dublin: Centre for Social and Educational Research, DIT.

Standing, K. (1999) Lone mothers and 'parental' involvement: a contradiction in policy? *Journal of Social Policy*, 28,3, 479-495.

Sylva, K. (1994) School Influences on Children's Development. *Journal of Child Psychology and Psychiatry*, 35, pp. 135-170.

Sylva, K. (1999) The role of research in explaining the past and shaping the future. In L. Abbott & H. Moylett (Eds.) *Early Education Transformed*. New Millennium Series, London: Falmer Press.

Tizard, B., Blatchford, P., Burke, J. Farquhar, C. & Plewis, I. (1988) *Young Children in School in the Inner City*. Hove: Lawrence Erlbaum.

Tymms, P. (1996) Theories, models and simulations: School effectiveness at an impasse. In J. Gray, D. Reynolds, C. Fitz Gibbon & D. Jesson, (Eds.) *Merging Traditions: The Future of Research on School Effectiveness and School Improvement*. London: Cassell.

Vygotsky, L.S. (1978) *Mind In Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Watkins, C. & Wagner, P. (1987) *School Discipline: A Whole School Approach*. Oxford: Basil Blackwell.

Weiner, B. (1985) An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, pp. 548-573.

White, K.R. Taylor, M.J. & Moss, V.D. (1992) Does Research Support Claims about the benefits of Involving Parents in Early Intervention Programs? *Review of Educational Research*, 62, 1. pp.91 - 125.

Woodhead, M. (1996) *In Search of the Rainbow: Pathways to Quality in Large-Scale Programmes for Young Disadvantaged Children*, Milton Keynes: The Open University.

Appendices

Appendix 1 – Data Collectors

Ava Battles
Máire Cleary
Gráinne Cooney
Maria Dempsey
Niall Dunlevey
Áine Fitzpatrick
Leanna Fogarty
Sandra Healy
Marion Heffernan
Aisling Higgins
Sinéad Higgins
Nuala Gallagher
John Garry
Bríd Ingoldsby
Kevin Lalor
Caelinn Largey
Deirdre Madden
Aidan Mc Carthy
Mary McGillick
Siobhán Mc Govern
Cathy Mc Grady
Aoife McNally
Sandra Mooney
Nodlaig Moore
Mary Murray
Bridget Newman
Liz Nixon
Phil O' Connell
Tricia O'Cuinneagáin
John O'Flaherty
Rosemary O'Leary
Eoin O'Mahony
Róisín O'Mara
Liam O'Sullivan
Hazel Pidgeon
Brigitte Raimbault
Colm Rush
Eoin Ryan
Ciarán Staunton
Gerry Tobin
Antoinnette Wills

Appendix 2
Child Development Status References

Cognitive Development Status Measure

The items were adapted from the Battelle Developmental Inventory, (1984, DLM Teaching Resources, Allen, TX, US); Detroit Test of Learning Aptitude, (1986, Pro-Ed, Austin TX); Woodcock and Johnson Psychological Battery, (1984, DLM Teaching Resources, Allen, TX, US); Laufmann Assessment Battery for Children, (1983, American Guidance Service, Inc); Boehm test of Basic Concepts, and parent's evaluations of child's preprimary care and education settings and experiences and parent's evaluations of child's preprimary care and education settings and experiences, (1969, The Psychological Corporation, New York, U.S); the Bracken Basic Concept Scale, (1984, Charles E. Merrill Publishing Company, Columbus, Ohio, US); Proves Psicopedagogiques D'Aprenewtages Instrumentals submitted to the IEA Preprimary Project by Catalonia, Spain, 1993, and the Iowa Test of Basic Skills, (1972, the Riverside Publishing Company); Purdue Elementary Problem Solving Inventory, (Purdue University, West Lafayette, IN).

Language Development Status Measure

The items were adapted from the Test of Early Language Development,TELD, 1981, Pro-Ed Publishing Company, Austin, TX, US,Test of Early Language Development Second Edition (TELD-2), 1991, Pro-Ed Publishing Company, Austin, TX, US; the Iowa Tests of Basic Skills Level 7 Form 5, 1972, Houghton Mifflin Company, Boston MA, US; and the Battelle Developmental Inventory, 1984, DLM Teaching Resources, Allen, TX, US; Test of Language Development Intermediate (TOLD-I), 1982, Pro-Ed Publishing Company, Austin, TX, US.

Social/Emotional Status Measure

This measure consisted of two sections. The first section contained items adapted from the Pictorial Scale of Perceived Competence and Social Acceptance Scales for Young Children, 1983 University of Denver, US. The second section was adapted from the IAR Questionnaire, 1976 FELS Research Institute, Yellow Springs, Ohio, US; Gruen, Korte, Stephens Internal – External Scale.

Academic Status Measure

Items in the mathematics section were adapted from the Battelle Developmental Inventory, 1984, DLM Teaching Resources, Allen, TX, US; Proves Psicopedagogiques D'Aprenewtages Instrumentals submitted to the IEA Preprimary Project by Catalonia, Spain, 1993, the Iowa Tests for Basic skills Level 7 Form 5, 1972, Houghton Mifflin Company, Boston, MA, US; California Achievement Tests, Fifth Education Level 12, 1992, CTB Macmillan/McGraw-Hill.

The reading comprehension assessment comprised picture comprehension, sentence comprehension, and story comprehension (both listening and reading). Items were adapted from the Woodcock Reading Mastery Tests – Revised form G, 1987, American Guidance, the Iowa Tests for Basic skills Level 7 Form 5, 1972, Houghton Mifflin Company, Boston, MA, US; Proves Psicopedagogiques D'Aprenewtages Instrumentals submitted to the IEA Preprimary Project by Catalonia, Spain, 1993; the Battelle Developmental Inventory 1984, DLM Teaching Resources, Allen, TX, US; the California Achievement Tests, Fifth Education Level 12, 1992, CTB Macmillan/McGraw-Hill; Comprehensive Tests of Basic Skill Form U Level D, 1981, CTB/McGraw-Hill, Monterey, CA, US.

The science measures assessed the children's knowledge and skills in areas such as temperature, the planets and estimation. Items were adapted from Building Visual Skills: Diagrams and other Graphic Aids, 1989, Siffe Court Books; HighScope K-3 Curriculum: Mathematics and Science 1991, HighScope Press.

Centre for Social & Educational Research

Dublin Institute of Technology
Rathmines House
143 – 149 Lower Rathmines Road, Dublin 6.

Telephone: +353 1 402 3492; Fax: +353 1 402 3498
Email: cser@dit.ie
Website: www.dit.ie/aa/cser.html

seven years old
seven years old
seven years old

Centre for Social & Educational Research

Centre for Social & Educational Research
Dublin Institute of Technology, Rathmines House
143 – 149 Lower Rathmines Road, Dublin 6.
Telephone: +353 1 402 3492; Fax: +353 1 402 3498
Email: cser@dit.ie
Website: www.dit.ie/aa/cser.html

Dublin Institute of Technology