# Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners

**An Evaluation by the Inspectorate of the Department of Education and Science**

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*The provision of high-quality teaching that is responsive to the learning needs of the pupils is essential.*

# Foreword by the Chief Inspector

This evaluation of literacy and numeracy in schools designated as serving areas of disadvantage is one of a series of in-depth thematic reviews by the Inspectorate. This evaluation indicates that teachers in schools designated as serving areas of disadvantage face particular challenges in developing children's literacy and numeracy skills and that a significant proportion of children have serious difficulties in both areas of learning.

Twelve schools, each with its own unique circumstances, participated in this evaluation. The importance of school context factors, such as school attendance and parental support, and their impact on the achievement of pupils in literacy and numeracy, was acknowledged throughout the review. The evaluation focused on the quality of teaching and learning in classrooms and concentrated on the implementation of policies and practices in schools that influence literacy and numeracy achievement.

In considering the findings of this report, it should be borne in mind that a relatively small number of schools were involved, and the conclusions from the report should therefore be interpreted in that context. Nevertheless, the analysis by the inspectors of the data gathered, much of it common to all participating schools, has importance for schools and for policy makers.

Some of the main areas of investigation included strategic school leadership and management and the extent to which whole-school planning informs individual teacher preparation for the teaching of literacy and numeracy. Good practice in schools was affirmed, and several aspects of provision for literacy and numeracy were reviewed favourably. Overall, however, the inspectors generally confirm the information provided by principals in the school information forms, that the achievement levels of pupils in literacy and numeracy give cause for serious concern. The need for teachers to have highly developed teaching skills that enable them to develop pupils' learning is emphasised in the report's conclusions. Assessment procedures and their impact on the development of suitable programmes to cater for the varying abilities and needs of children are also given consideration. The report highlights the importance of consolidating learning and of ensuring linkage across the strands of the curriculum in literacy and numeracy.

As well as the implications for principals and teachers, in-school management and boards of management, the findings are relevant for the various Department of Education and Science support services that engage with designated schools. The evaluation highlights the need for these services to adopt a more co-ordinated approach to ensure that a coherent message is given to schools in relation to implementing strategies for improving the teaching and learning of literacy and numeracy.

I would like to acknowledge the very high level of co-operation the Inspectorate received from all schools during the evaluation. I wish to thank the principals and teachers for their openness and frankness and for giving of their professional insight into the complexities associated with this theme. I would also like to thank the Evaluation Support and Research Unit of the Inspectorate for co-ordinating this research and the other members of the Inspectorate involved in the conduct of the evaluation. The Inspectorate looks forward to engaging in further dialogue with all designated schools to support them in their endeavours to improve the learning and achievement levels of children in literacy and numeracy.

Eamon Stack
Chief Inspector

# Acknowledgements

*Classroom libraries should provide pupils with a wide range of supplementary reading materials such as big books, parallel readers, novels and real books.*

# Executive Summary

In March 2004 the Inspectorate of the Department of Education and Science undertook an evaluation of literacy and numeracy in a selected number of schools with very high levels of disadvantage. The purpose of the evaluation was to identify school variables that impact on the development of literacy and numeracy skills and to recommend policies and strategies that would enable schools to improve children's achievements in literacy and numeracy. Twelve schools were selected from a Department of Education and Science list of schools designated as serving areas of disadvantage.

## Evaluation model

Inspectors evaluated teaching and learning in literacy and numeracy in a sample of approximately six mainstream classes in each of the twelve selected schools. A school information survey form was used to generate background and contextual data, and structured interviews with principals, classroom teachers and other teachers in a support role were conducted. Whole-school planning documentation, school assessment policy, teachers' curriculum plans, information on children's achievement and programme planning in relation to individual children were reviewed.

## School context factors

The challenging context in which these schools work and the many external factors that impact in a negative way on children's learning highlight the significant challenges presented to management and staff in the schools evaluated. The level of absenteeism of pupils in the majority of the schools is a particular cause for concern. Between a quarter and a half of all pupils in the schools surveyed were absent from school for more than 20 days in the year. It is recommended that schools place greater priority on improving children's attendance and that strategies be devised that target the children with the lowest levels of attendance. The Educational Welfare Board and the Home School Community Liaison Scheme should consider further how best to assist schools to ensure that a culture of attendance is developed. While schools recognise the importance of parental involvement in their children's education, only limited success is reported in this area. Schools should explore more actively ways of supporting parents in becoming involved in the education of their children, and the Home School Community Liaison service should develop further strategies for involving the parents of older children in their education.

The information provided by principals on the achievement levels of children in literacy and numeracy gives cause for serious concern. The scale of low achievement of children in numeracy is particularly worrying. Nearly half the children in the schools evaluated had very low scores in reading, while almost two-thirds of children were extremely weak in mathematics.

## Literacy and numeracy in schools: provision and recommendations

### Planning and preparation

The individual learning needs of children in schools designated as serving areas of disadvantage are such that best-quality planning and optimal teaching practices are required. Inspectors noted that most schools have devised school plans for literacy and numeracy but that planning for literacy and

numeracy could be further developed in order to provide an effective framework for high-quality curriculum implementation in classrooms. It is recommended that in-school management should ensure linkage between whole-school planning, individual teachers' preparation, and their everyday practice in relation to literacy and numeracy. Greater emphasis is necessary in teachers' planning on differentiated approaches to cater for children with varying learning abilities and needs and the setting of more specific time-related targets in literacy and numeracy. It is recognised that there is a difficulty about the provision of time for collaborative planning; this issue should now be resolved by all the education partners.

### Teaching and learning

Inspectors commented favourably on the presentation of lessons and on the management of classroom activities in both literacy and numeracy. However, significant weaknesses and gaps in the cyclical process of planning, teaching and assessment were highlighted. Inspectors raised concerns about the standards of achievement in both literacy and numeracy, and it was recommended that teachers should devote more attention to the consolidation of learning and to linkage between the strands of the curriculum. Fewer than half the children in middle and senior classes were able to read fluently and with understanding. In numeracy, inspectors noted that areas of particular difficulty for children in the middle and senior classes included place value, estimation, and problem-solving skills. This report advises that a team of teachers with recognised expertise in literacy and numeracy should work in a professional development role to provide specialist support for schools in these curricular areas in order to enhance and develop teacher expertise and to further develop in-school management processes and systems. It is also recommended that high-support programmes, such as Reading Recovery, that feature systematic support for individuals or small groups, should be extended, giving priority to the most disadvantaged schools.

Most classrooms provide print-rich learning environments, although inspectors raised concerns about the lack of, or poor access to, a suitable range of books in middle and senior classes. Inspectors advised many schools to improve the quality of classroom environments for learning in mathematics.

### Assessment

Most schools used a variety of assessment instruments to determine children's progress in literacy and numeracy, but analysis and use of the data was limited. While teachers administered standardised and other tests, the results were not used to inform the development of suitable teaching programmes. In general, most of the evaluative statements made by inspectors suggest that assessment policy and practice are aspects of provision that require significant attention and improvement. The various support services, including the School Development Planning Support initiative (SDPS) and the Primary Curriculum Support Programme (PCSP), together with the Department's Inspectorate, the National Council for Curriculum and Assessment (NCCA), and other relevant agencies, should provide more co-ordinated and coherent guidance to schools in areas such as classroom-based assessment, the interpretation of the outcomes of standardised tests results, and the link between assessment and teaching and learning.

### Learning support

In most schools, the need for a more co-ordinated and integrated service for children with learning support needs in both literacy and numeracy was highlighted. Inspectors recommended that class

teachers and learning-support or resource teachers should collaborate on a formal basis to plan the delivery of focused learning programmes. The limited involvement of classroom teachers in planning to meet the learning needs of pupils with very low achievement and in contributing to the development of Individual Profile and Learning Programmes (IPLPs), as recommended in the Learning Support Guidelines (2000), are identified as areas of significant weakness. In half the schools in the evaluation, inspectors reported that no learning-support provision was available for numeracy. Where disadvantaged schools can demonstrate inability to provide learning support in mathematics because of the size of the case load for learning support in English, the Department of Education and Science should consider what further supports need to be put in place in the school.

### Strategic school leadership

The issue of strategic school leadership and management is pivotal to the promotion of literacy and numeracy in schools in the evaluation. It is acknowledged that most boards of management do not have an active involvement in the life of the school and that specific training is required to enable management boards to undertake their role in relation to monitoring the education provision in their schools. The very challenging leadership role of the principal is also acknowledged, particularly those who have teaching duties. The majority of principals report that there is a special duties post in the school related to literacy and numeracy; however, inspectors commented that the potential of principals and in-school management teams to provide curriculum leadership is not fully realised in most schools.

The professional development of teachers was also identified as an area in need of improvement. The majority of teachers interviewed stated that their initial training and education did not prepare them for the challenge of teaching in a disadvantaged setting. This is significant, in that half the teachers interviewed had five or fewer years' teaching experience. The continuing professional development of staffs is generally not addressed at school level, either by boards of management or by in-school management. There is a need to plan professional, school-based development programmes that would allow a coherent whole-school response to the particular needs and contexts of each school.

### Other recommendations

Other recommendations of a general nature put forward by the evaluation team include the following:
- The development of community initiatives focusing on early childhood care and education should be supported in order to provide extensive opportunities for the development of the language and communication skills of very young children. The lessons learned from the Early Start initiative should inform the further development of community-based pre-school provision for all children in areas that are designated as disadvantaged.
- Greater access to adult education opportunities should be provided for parents living in areas of severe disadvantage.
- The Department of Education and Science should consider issues associated with teacher turnover in schools designated as serving areas of disadvantage with a view to developing strategies for the retention of teachers.

*Pupils' learning in mathematics should be facilitated by the extensive use of concrete materials.*

# 1 Introduction

Education makes a fundamentally important contribution to the quality and well-being of our society. The Primary School Curriculum outlines the following as general aims of education:

- **to enable the child to live a full life as a child and to realise his or her potential as a unique individual,**

- **to enable the child to develop as a social being through living and co-operating with others and to contribute to the good of society, and**

- **to prepare the child for further education and lifelong learning.**

The development of children's abilities in the areas of literacy and numeracy is central to the fulfilment of these broad aims. This evaluation focused on the issues of literacy and numeracy among children in twelve schools serving areas of disadvantage. In accordance with its remit under the *Education Act 1998*, the Inspectorate has undertaken this research-based evaluation project in order to provide boards of management, principals and teachers with constructive advice in relation to schools' provision for literacy and numeracy. The findings presented in this report are also intended to support policy formulation at system level.

The schools selected for the evaluation operate in very challenging environments. This report outlines some context factors pertaining to the pupils in the schools in this study, and data on pupil absenteeism, achievement in literacy and numeracy, school staffing and parental involvement in their children's education are examined. Research on school effectiveness and school improvement indicates that schools can and do make a difference to achievement levels attained by pupils. This evaluation focused primarily on the quality of teaching and learning in classrooms and concentrated on the implementation of policies and practices in schools that influence literacy and numeracy achievement.

At the planning stage of the evaluation, inspectors outlined key characteristics of teaching and learning that should be present to ensure that pupils, particularly those in disadvantaged schools, can acquire appropriate literacy and numeracy skills. These characteristics are based on the approaches to teaching and learning that are outlined in the *Primary School Curriculum (1999)* statements. These include

- recognition of the necessity for high-quality whole-school action planning that is focused on school improvement
- prioritisation of literacy and numeracy by boards of management, school principals, and teachers
- acknowledgement of the integral role of assessment in the teaching and learning cycle
- provision of high-quality teaching that is responsive to the learning needs of the pupils in literacy and numeracy
- recognition of the need for continuing professional development for school principals and teachers.

Ultimately, the aim of this report is to effect school improvement. It is intended that the findings will assist schools in reviewing the effectiveness of their provision for pupils in literacy and numeracy development and will inform system-related responses that are required to assist schools in meeting these challenges. The report aims to support school management by focusing on the importance of understanding teaching and learning as part of a broad cycle that involves effective planning and well-structured teaching that is responsive to the learning needs of the pupils and involves the continuous use of assessment to provide feedback to learners and to inform plans for future learning.

## 1.1   Educational disadvantage

Disadvantage, in the context of education, is considered to result from discontinuities between children's knowledge, skills and attitudes and the demands of schools. (*Educational Disadvantage in Ireland, 1995*, p. xi.) Educational disadvantage as defined in Section 32 (9) of the *Education Act (1998)* means the impediments to education arising from social or economic disadvantage that prevent pupils from deriving appropriate benefit from education in schools. A child may be regarded as disadvantaged at school if, because of economic, cultural or social factors, the competencies that he or she brings to school differ from those valued in schools. Where participation and achievement in the education system are impeded by economic or social factors, the state seeks to eliminate or compensate for the sources and consequences of educational disadvantage.

## 1.2   Interventions and supports for schools

Since the 1960s, educators and policy-makers have become increasingly concerned with reducing educational disadvantage by increasing children's participation levels in education and by tackling under-performance and under-achievement levels. During the last four decades various strategies have been introduced to counteract social disadvantage, and diverse educational initiatives were put in place. These included pre-school intervention programmes, such as the Rutland Street Project, pre-schools for Travellers, and the Early Start programme. Initiatives focusing on primary school children aged from 4 to 12 years included the Disadvantaged Area Schools scheme, the Home School Community Liaison scheme, Breaking the Cycle, the Support Teacher project, and Giving Children an Even Break. The most recent initiative, the School Completion Programme, aims to increase the number of pupils staying on in school to complete the senior cycle programme at post-primary level.

Most of the schools participating in this study benefit from significant extra personnel. These include resource teachers for pupils with special needs, Home School Community Liaison teachers, and teachers in posts granted on a concessionary basis. The pupil-teacher ratio in these schools is generally low in comparison with that found nationally.

## 1.3   Educational disadvantage and the achievement of pupils

Several research studies have shown that the achievement of pupils in schools designated as disadvantaged is significantly below those of pupils in other schools. Weir, Milis and Ryan (2002) found that the average attainment of sixth-class pupils in reading and Mathematics was significantly lower than that of pupils nationally. Weir (2003) found that the attainment of pupils in schools where the levels of disadvantage were particularly severe was lower than pupils in disadvantaged

schools generally. Shiel, Cosgrove et al. (2001) studied the performance of Irish fifteen-year-old students in literacy in the OECD Programme for International Student Assessment (PISA 2000) and found that, while Irish students achieved the fifth-highest score among twenty-seven OECD countries with regard to literacy, 11% of Irish students were at or below Level 1 on the PISA reading proficiency scale. This means that 11% of our fifteen-year-olds can complete only the most basic of reading tasks. The study found that the achievement scores of students in designated disadvantaged schools were significantly lower than those of students attending non-designated schools. Weir and Ryan (2000) found that the average achievement of Junior Certificate students, who received their primary education in severely disadvantaged schools that participated in the Breaking the Cycle scheme, was considerably below that of students nationally.

## 1.4   Literacy in the primary school curriculum

*The Primary School Curriculum—English (1999)* provides the framework that informs the focus for teaching at each class level and details the indicators for pupils' performance and attainment. The philosophy and approaches to reading outlined in the curriculum informed the perspectives of the inspectors who evaluated the quality of teaching and learning in literacy.

*The Primary School Curriculum—English (1999)* presents oral language, reading and writing as aspects of an integrated language process, and the approach to reading "is based on children's general language experience and ability" (Teacher Guidelines, p. 13). The curriculum highlights the importance of providing each child with a reading experience that is appropriate to his or her needs and abilities. A variety of approaches to assessment is outlined in the curriculum, and the purpose of assessment is to "help the teacher to enhance the learning experiences of the children" (p.15).

The development of literacy is emphasised at each class level, and the elements of the reading process are presented in different strand units:
- Developing concepts of language and print
- Developing reading skills and strategies
- Reading for pleasure and information
- Developing interest, attitudes, and the ability to think
- Responding to text.

In the infant classes *(junior and senior infants)* the focus of the curriculum is placed on oral language development, which has a "crucial role to play in preparing the child to read" (p. 54). A range of informal reading activities is undertaken, and the child is introduced to a variety of texts. The teacher models the reading process using large-format books and the language experience approach, and the concepts of print, such as words, letters, and top-to-bottom and left-to-right orientation, are introduced. Emphasis is placed on children's visual awareness of language through exposure to a rich and changing environment of print, and a basic sight vocabulary is developed. The curriculum emphasises word identification strategies that include phonological and phonemic awareness.

In the junior classes *(first and second classes)* pupils will continue to develop strategies to identify words and onset and rime (learning to connect the beginnings of words and syllables with their rhyming parts), learn common word endings, word families, and roots, and use knowledge of the letter-sound relationships, grammar and syntax and contextual clues when identifying new words.

Children are encouraged to read an increasing range of fiction and non-fiction texts, to engage in personal reading, and to use the class and school library. At this stage, pupils are encouraged to read for information and to develop a range of comprehension strategies.

In the middle classes *(third and fourth classes)* and senior classes *(fifth and sixth classes)* children are becoming increasingly independent readers who continue to develop a range of reading strategies. The curriculum indicates that children should develop a range of comprehension strategies for dealing with narrative text (an account of events, experiences etc.), expository text (text that describes or explains), and representational reading material (text in the form of diagrams, pictures and graphs). Pupils should read with expression and fluency and be capable of engaging in sustained silent reading. Children at these class levels should explore aspects of books such as character, favourite authors, setting, plot, and motive. They should be able to retrieve and interpret information and should support arguments and opinions with evidence from the text.

## 1.5    Numeracy in the primary school curriculum

*The Primary School Curriculum—Mathematics (1999)* provides the framework of content objectives and skill development that children at each class level should be enabled to achieve during their primary school education. The approaches to mathematics outlined in the curriculum informed the approach of the inspectors to the evaluation of the quality of teaching and learning in numeracy.

The mathematics curriculum aims to provide children with an understanding of mathematical concepts and processes appropriate to their level of development and ability. The curriculum encourages the development of positive attitudes towards mathematics, the acquisition of problem-solving abilities, and the ability to apply mathematics to everyday life. Children are expected to acquire proficiency in fundamental mathematical skills and recall basic number facts.

The curriculum is presented in five strands:
• Number
• Algebra
• Shape and space
• Measures
• Data.

Through each of these strands children should develop a range of skills, and these include
• Applying and problem-solving
• Integrating and communicating
• Reasoning
• Implementing
• Understanding and recalling.

The philosophy of constructivism and guided-discovery methods underpin the mathematics curriculum, and the child is seen as an active participant in the learning process. It is envisaged that the child will be guided to use existing ideas to make sense of new experiences and situations and to experiment to develop new ideas and concepts, and the teacher will guide the child in constructing meaning and in developing mathematical strategies for solving problems. The

curriculum acknowledges that it is difficult to cater for the varied needs of the children (ability, attainment and learning style) if a common whole-class programme is followed. Therefore, the planning, teaching and assessment of the mathematics programme should take into account the child's previously acquired knowledge, and periods of frequent revision are recommended as essential. The purpose of assessment is to provide information that will be useful in identifying the child's existing knowledge, misconceptions and learning strategies. This information should enable the teacher to cater for individual differences in ability and learning styles and to provide opportunities for extension work for more able children.

## 1.6    Outline of report

The Inspectorate of the Department of Education and Science (DES) undertook this evaluation of teaching and learning in the areas of literacy and numeracy in twelve schools designated as serving areas of disadvantage during March 2004. Chapter 2 describes the evaluation methodology adopted in the conduct of this study. The process of school selection, inspection procedures and the evaluation schedules adopted for the exercise are also explained. School context is addressed in Chapter 3, and issues such as children's achievement and attainment, absenteeism, parental support and turnover of staff are considered. The quality of planning and preparation in the relevant schools is the theme of Chapter 4, and there is a particular emphasis on how planning for literacy and numeracy is prioritised. The observations and the comments of the inspectors involved in the evaluation are incorporated in the reviews of teaching and learning presented in Chapter 5 and Chapter 6. Specific recommendations for how the teaching and learning of literacy and numeracy could be improved are presented. The main focus in Chapter 7 is on the quality of the assessment of children, including children with special learning needs. The final chapter reports overall findings and recommendations in relation to the evaluation of teaching and learning of literacy and numeracy in the twelve designated schools.

# 2 Evaluation Methodology

## 2.1 Evaluation objectives

The overall purpose of the evaluation was to report on the quality of provision for literacy and numeracy in a sample of schools designated as serving areas of disadvantage. The evaluation focused on variables that impact on the development of literacy and numeracy skills in twelve schools designated as disadvantaged, and it aimed to recommend policies and strategies that would enable schools to improve children's achievement in literacy and numeracy

## 2.2 Selection of schools

Twelve schools were selected from a Department of Education and Science list of schools designated as serving areas of disadvantage. The twelve schools were selected from among the one hundred schools with the highest reported levels of disadvantage in the country, and the selection procedure ensured that the sample included a variety of school types and locations. The sample included single-sex and co-educational schools and featured junior schools, senior schools, and vertical schools. All twelve schools were urban. Seven of the schools were in Dublin, three were in Limerick, and two were in Cork.

## 2.3 Development of the evaluation model

During the period January–March 2004 a steering group of inspectors, supported by the Evaluation Support and Research Unit, developed an evaluation model that incorporated four main strands of evaluation activity. These were:

- evaluation by inspectors of teaching and learning in literacy and numeracy in a sample of mainstream classes in each of the twelve selected schools
- completion of a school information survey form by the principal
- structured interviews with the school principal, classroom teachers, learning-support and resource teachers, and Home School Community Liaison teachers, and
- review by inspectors of whole-school planning documentation, teachers' curriculum plans, assessment policy, information on children's achievement, and programme planning in relation to individual children.

A one-day orientation seminar was organised for a team of twelve inspectors nominated to undertake the school-based evaluation work.

A two-person evaluation team was assigned to each school, and one inspector from each team made contact with the school to make arrangements for the school-based phase of the evaluation. Following consultation with the principal in each school, two days during March 2004 were nominated for the school-based evaluation activity.

*A co-ordinated teaching programme devised by the class teachers, the learning support teacher and the resource teacher is essential to support the literacy skills of pupils with learning difficulties.*

## 2.4    Evaluation of teaching and learning

In each school, five to six classes were randomly selected, taking into account the range of class levels in the schools. In some classes the focus of the evaluation was on literacy; in others it was on numeracy. A total of 31 literacy lessons and 35 numeracy lessons were observed. The evaluation visit in each class setting lasted for approximately 90 minutes. The inspection included observation of teaching and learning, review of children's work, review of the teacher's planning documentation, and consideration of arrangements for meeting the needs of individual pupils. Inspectors also interacted with children on a whole-class basis and with groups and individuals in order to evaluate children's learning.

The framework for the class-based inspection activity incorporated observation schedules, document review schedules and reporting templates to facilitate the evidence-gathering by inspectors. The schedules included items on the quality of the learning environment in the classroom, the range of methodologies and strategies employed in the teaching of literacy and numeracy and the differentiation of the curriculum to take pupil needs into account. The templates facilitated reporting on the content of the curriculum programme taught and the co-ordination and linkage between the work of the class teacher and support teachers. The document review instrument covered aspects such as curriculum planning, planning for monitoring and assessment, and review of children's work samples. Following the class setting visits the inspectors completed a detailed evaluative commentary in relation to each aspect of practice reviewed. A four-point rating scale was also applied in respect of each evaluation question in order to facilitate the collation and data analysis processes associated with the preparation of this composite evaluation report.

## 2.5    School information form

School principals completed a survey form that provided specific information in relation to aspects of school organisation and provision for literacy and numeracy. Data was gathered in relation to participation in initiatives, enrolment and attendance of children, numbers of children for whom additional supports were provided, range of school resources, staffing and pattern of teacher turnover, organisation of special duties, and school planning and assessment policy. Survey forms were returned by all twelve schools, and, in addition to providing a comprehensive school profile, the principals communicated their professional insights in relation to literacy and numeracy provision in their schools.

## 2.6    Structured interviews with school personnel

Inspectors conducted a structured interview with each school principal. The themes for discussion included identification of social context factors impacting on the school population, whole-school planning policy and practice, and school strategies for identifying challenges or factors that impede school efforts towards improving children's achievement levels. The discussion also provided an opportunity to review teaching approaches promoted throughout the school, the involvement of parents, and professional development opportunities for teachers in the areas of literacy and numeracy. The structured interviews provided opportunities for school principals to share their views about the further development of school and system provision.

Each inspector conducted structured interviews with the mainstream class teachers whose classes were selected for evaluation. The main issues addressed during these discussions related to whole-

school and classroom planning approaches, obstacles to the improvement of literacy and numeracy, and the involvement of parents in the development of literacy and numeracy. The teachers also commented on professional development opportunities for teachers and on changes that the school management and the Department of Education and Science could make in order to bring about an improvement in the literacy and numeracy achievement of children.

Inspectors also met teachers involved in learning-support or resource teaching for children with special educational needs. Where possible, the Home School Community Liaison co-ordinator was also included, and the themes for discussion were the same as those for the interview with the school principal.

A record of the main issues discussed with each of the groups was prepared. The Evaluation Support and Research Unit entered the responses in a database so that the perspectives of the principals and other school personnel could be examined individually and compared or contrasted.

## 2.7    Review of school policies and planning documentation

Inspectors reviewed the classroom planning documentation and work samples of children in the classes visited. The inspection team also evaluated the whole-school policies, school plans, assessment data and other school documentation relating to the co-ordination of provision for literacy and numeracy in the school. Inspectors employed a common document review framework to evaluate each school's focus on collaborative planning processes, the emphasis within policies on school improvement, prioritisation of literacy and numeracy objectives, arrangements for the monitoring and review of implementation of aspects of the school plan, and references in school plans and policies to professional development opportunities for teachers.

## 2.8    Feedback to schools and preparation of evaluation reports

Following the evaluation exercise, each inspection team prepared an evaluation report that identified the main findings of the evaluation of literacy and numeracy in each of the twelve schools and outlined the inspection team's recommendations in the context of the school's current provision. The reporting inspector held a post-evaluation meeting with the school principal in each of the schools in order to give feedback, to review the content of the report, and to provide an opportunity for discussion about the further development of provision for literacy and numeracy in the school. The twelve evaluation reports were issued to schools in July 2004.

## 2.9    Presentation of evaluation findings in the composite report

The four strands of the evaluation model facilitated the compilation of an extensive information base with regard to the provision for literacy and numeracy in the twelve schools evaluated. The comprehensive school-based evaluation by inspectors yielded important findings in relation to teaching and learning in both areas. The model has also captured the professional perspectives of those working directly with the classes. The findings from the four strands of the evaluation are integrated throughout the remainder of this report.

## 2.10  Quantitative and qualitative terms used in the report

A number of quantitative and qualitative terms are used throughout the report. The following table provides a summary of the most common terms used:

| Quantitative terms used in the report | Approximate percentage of occurrence |
|---|---|
| Almost all | More than 90% |
| Most | 75–90% |
| Majority | 50–74% |
| Fewer than half | 25–49% |
| A small number | 16–24% |
| A few | Up to 15% |

| Qualitative terms used in the report | Approximate level of performance |
|---|---|
| Very good | Optimal performance |
| Good | Competent performance |
| Fair | Scope for development |
| Weak | Experiencing significant difficulty |

Table 2.1: Quantitative and qualitative terms used in the report

*It is important that children are motivated and engaged in learning activities that allow them to experience success in literacy lessons.*

# 3 School and Pupil Contexts

## 3.1 Introduction

This chapter provides an outline profile of pupils enrolled in schools serving areas of disadvantage in terms of social and cultural background, attainment and achievement, levels of absenteeism, and parental supports. This information was generated through questionnaires and structured interviews with teachers and principals. This chapter outlines the staffing levels of the schools and their participation in DES initiatives to counteract educational disadvantage. Teachers' engagement with continuing professional development is also explored.

## 3.2 Social disadvantage and school context

The literacy and numeracy evaluation provided school principals and teachers with opportunities to discuss important context factors that impact on literacy and numeracy. While acknowledging that the majority of parents are deeply concerned for the welfare of their children, the principals and class teachers outlined a wide range of social factors that have a negative effect on pupils and constrain parents' involvement in their children's education, limit parents' expectations for their children, and restrict pupils' capacity to benefit from the educational experiences provided for them. Home background and socio-economic factors were identified as barriers to success for a significant number of pupils. The prevalence of drug misuse in the children's immediate environment, family dysfunction, lack of effective parenting, ineffective supervision and lack of educational resources in the home were among the negative context factors cited by school principals. Teachers and principals highlighted the problem of high levels of absenteeism as a major challenge for schools and suggested that the issue was linked closely with wider socio-economic problems.

Most principals referred to a lack of parents' involvement in their children's schooling, and some parents were described as being apathetic and indifferent to their children's education. A small number of teachers attributed this lack of interest to parents' limited or negative educational experiences while in primary school. Teachers commented that reading is not part of the culture of the home and that pupils' lack of exposure to books and other education capital in the home was a barrier to the promotion of literacy skills. Most teachers stated that they found it difficult to encourage pupils to engage in reading as a leisure activity. Teachers remarked that many parents may not have the confidence or reading competence themselves to encourage their child's reading. Frequent reference was made to the fact that children come to school with a significant oral language deficit and that the necessary oral skills and competencies that are a prerequisite for the development of literacy skills had not been developed by the pupils. Teachers stated that some pupils come to school extremely tired and are consequently unable to concentrate on their school work or are unwilling to co-operate in classroom activities. Teachers' observations about factors that impact negatively on children's achievement are supported by numerous empirical studies.

Principals and class teachers stated that many pupils in their schools present with behavioural difficulties and that sustaining orderly behaviour and ensuring the general co-operation of pupils required considerable effort. Teachers referred to the difficulty of managing pupils with emotional

difficulties in class, and they highlighted the fact that dealing with challenging behaviour impedes implementation of the programme of work for pupils.

Approximately 10% of the pupils in the schools under review were assessed as having special educational needs and were in receipt of resource teaching. In one school nearly one-quarter of the school population was identified as having special educational needs. The numbers of pupils receiving learning support varied from school to school, but on average one-fifth of the pupil population received learning support. In one school the proportion receiving learning support was in excess of one-third of the pupil population, while in another school it was as low as 6%.

## 3.3    Patterns of pupil attendance

The twelve schools provided data relating to pupil attendance and participation in education. This data indicate that absenteeism is a significant problem for many children. The total pupil attendance in the twelve schools for the school year 2002/03 ranged from 79% to 91.5%. The schools provided information on the numbers of pupils who were absent from school for more than ten days, absent between 11 and 20 days, absent 21 to 30 days, and absent from school on more than 30 days.

Table 3.1, below, shows the proportion of the school population that missed more than 20 days in each of the twelve schools. The figures range from 23.64% to 52%. The average number of pupils who were absent for more than 20 days, in the twelve schools, was 36.5%. The comparable figure for primary schools generally is 11%.

| Schools | a | b | c | d | e | f |
|---|---|---|---|---|---|---|
| Proportion of pupils absent on more than 20 days | 23.6% | 24.3% | 24.7% | 29.2% | 31.2% | 33.6% |

| Schools | g | h | i | j | k | l |
|---|---|---|---|---|---|---|
| Proportion of pupils absent on more than 20 days | 33.9% | 39.9% | 45.6% | 47.8% | 52% | 52.6% |

Table 3.1: Proportion of school population absent on more than 20 days during the school year 2002/03

The data reveal that between a quarter and a half of all pupils in the schools surveyed were absent from school for more than 20 days in the year. A review of the figures in relation to the subset of pupils within this group who missed more than 30 school days suggests that some pupils have a very discontinuous school experience. The figures in respect of each school range from 9% to as high as 40% of pupils absent on more than 30 school days.

During the structured discussions with inspectors, many school principals and class teachers identified pupil non-attendance as one of the greatest obstacles to the improvement of literacy and numeracy in their schools. Inspectors reported that there was an awareness among school personnel that absenteeism not only has a dramatically negative effect on pupils' attainment levels in literacy and numeracy but also causes serious disruption of the learning opportunities of their classmates. In considering the impact of non-attendance on pupils, inspectors note that

- pupils need access to continuous and systematic educational programmes and must, therefore, attend school daily,
- gaps in concept and skill development are inevitable as pupils frequently miss the introduction or consolidation of new concepts and become frustrated as the material or activities the class has been working on may appear incoherent to them, and
- planning for the individual needs of pupils is not effective and the provision of learning support becomes unproductive when individual programmes unravel because of the non-attendance of pupils.

A few principals reported some success in relation to school-based initiatives, such as the School Completion Programme, that aimed at improving the attendance of some pupils.

In general, however, the significant level of pupil absenteeism identified suggests that a response is required from parents, from schools, from the National Educational Welfare Board, and from the Department of Education and Science. A focused intervention is necessary that makes it very clear to parents that they have a responsibility to ensure that their children can participate fully in their education. A major implication for schools is that day-to-day tracking of aggregate days missed must be undertaken as part of a systematic whole-school strategy aimed at addressing the problem of pupil absenteeism. It is suggested that the expertise of the Home School Community Liaison service should be further exploited in the development of targeted initiatives aimed at pupils who are persistently absent. It is recommended that the National Educational Welfare Board be consulted regarding the development of responses to the extremely poor attendance levels of a large number of pupils in these schools.

## 3.4    Profile of literacy and numeracy achievement levels of pupils

The Evaluation Support and Research Unit (ESRU) collated pupil achievement data provided by the schools involved in the evaluation in order to build an overall profile of pupil performance in reading and mathematics. The profiling exercise has certain limitations, because the testing and data-gathering were carried out by schools as part of their routine assessment practices and the test conditions and collation process were not co-ordinated in advance. Nevertheless, the information provides an indication of pupil achievement in the sample of schools. It should be noted that the profile of achievement presented below cannot be interpreted as a general indication of pupil performance in schools outside the specific sample under review.

Eleven of the twelve schools provided assessment information on the performance of pupils on standardised tests in reading and mathematics, and in most cases these assessments were undertaken with pupils at each class level, from first to sixth classes, during the previous academic year. In junior schools, assessment information was provided in respect of pupils in first and second classes only. One school provided recent test results for English but not for mathematics. Test results indicated the number of pupils at each class level who achieved scores within each quintile band, as follows: 1st to 20th percentile; 21st to 40th percentile; 41st to 60th percentile; 61st to 80th percentile; 81st to 99th percentile. Summary information was provided in respect of a total of 1,477 pupils for reading and 1,080 pupils for mathematics.

**Measured achievement in reading**

Figure 3.1 presents a profile of the measured achievement of 1,477 pupils, or 97% of the pupils in the classes tested in 11 schools for reading. The profile shows that 639 pupils (43%) had scores that fall at, or below the 20th percentile. In some schools a much higher proportion of pupils falls within the lowest achievement band. In half the schools, for example, more than 50% of pupils performed in the bottom quintile. In two schools approximately 60% of pupils tested from first to sixth classes performed in the lowest quintile. Two of the schools had a comparatively smaller proportion of pupils in the lowest quintile, with 24% and 29% of pupils in this range, respectively.
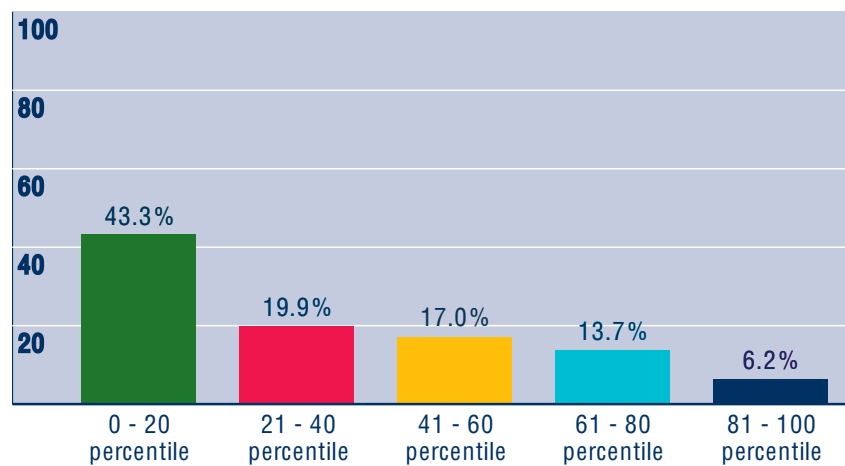


Figure 3.1: Performance of all pupils (first to sixth classes) tested within each quintile band in reading.

Of the 1,477 pupils tested, a low proportion achieved above the 80th percentile in reading. Only 91 pupils (6%) were reported by schools to have scored within the top band. At the level of individual schools, the proportion of pupils tested who achieved in the top band ranged from 2.1% to 11.5%.

The reported performance in reading is weaker at fifth and sixth-class levels when compared with the overall performance of pupils. 555 pupils were in the senior classes in the 11 schools that provided information on recent test performance in reading. 260 pupils (47%) in fifth and sixth classes scored in the lowest quintile band, while only 19 pupils out of 555 (3.4%) achieved scores in the top band of achievement in reading.

| | Percentile | |
|---|---|---|
| | At, or below, the 20th percentile | Above the 80th percentile |
| Average scores for all class levels in literacy | 43.3% | 6.2% |
| Fifth and sixth classes | 46.85% | 3.4% |

Table 3.2: Percentage of pupils in fifth and sixth classes scoring less than the 20th percentile and above the 80th percentile on school-administered standardised tests in literacy

**Measured achievement in mathematics**

Figure 3.2 presents a profile of the mathematics performance of 1,080 pupils in respect of whom schools provided information. Although 10 schools provided assessment data for mathematics, the scores provided by one school are not included, because they dated from 1997. This total figure, therefore, represents approximately 80% of the pupils in the classes tested in 9 schools. The profile shows that 691 pupils (64%) had scores that fell below the 20th percentile. In half the schools more than 60% of pupils performed in the bottom quintile. In two schools approximately 80% of pupils tested from first to sixth classes performed in the lowest quintile in mathematics. One of the nine schools had a significantly lower proportion of pupils in this low band, with 18.4% of pupils achieving scores in this range.
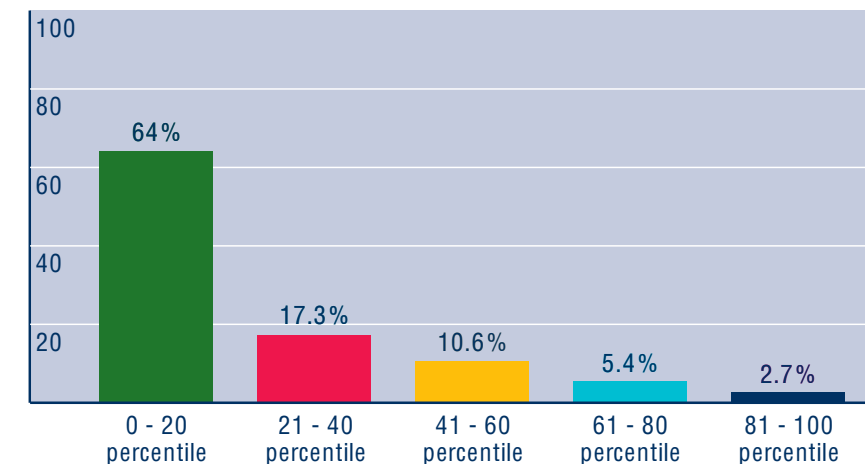


Figure 3.2: Proportion of all pupils (first to sixth classes) tested within each quintile band in mathematics. The chart represents 1,080 pupils from 9 schools.

Of the 1,080 pupils tested, a very low proportion achieved above the 80th percentile in mathematics. Only 29 pupils (2.7%) were reported by schools to have scored within the top band. The proportion of pupils tested who achieved scores in the top band ranged from 0.3% to 14.3%.

Pupils' achievement in mathematics appears to decline, comparative to pupils generally, as they progress through the school. 479 of the 1,080 pupils were in these senior classes in the nine schools that provided information on recent test performance in mathematics. 350 pupils (73%) in fifth and sixth classes scored in the lowest quintile band, while only 6 pupils out of 479 (1.25%) achieved scores in the top band of achievement in mathematics.

| | Percentile | |
|---|---|---|
| | At, or below, the 20th percentile | Above the 80th percentile |
| Average scores for all class levels in numeracy | 64% | 2.7% |
| Fifth and sixth classes | 73% | 1.25% |

Table 3.3: Percentage of pupils in fifth and sixth classes scoring less than the 20th percentile and above the 80th percentile on school-administered standardised tests in numeracy

It should be noted that the profiles of achievement varied from school to school within the ranges described above, and that in a few of the schools the incidence of low achievement is significantly lower than in others. It must be borne in mind that these results are based on a small sample of schools.

**Challenge of addressing low achievement levels**

The scale of low achievement in both literacy and numeracy revealed through the profiling exercise gives cause for serious concern. The data presented above suggest that the pupils in the sample are significantly behind in terms of mastery of basic skills and concepts in both reading and mathematics. These results indicate that many pupils are leaving primary schools with very low levels of reading ability and a poor grasp of mathematical concepts. The dramatically low achievement levels reported suggest that pupils are not benefiting fully from their educational experiences. Many pupils are transferring to second-level schools with a very limited range of skills and core competencies and, as a result, their potential to benefit from second-level education is very limited. The findings should be of major concern to schools and to policy-makers, given the importance of language competence as a foundation for learning in many disciplines and the central importance of mathematical skills and concepts in engaging with scientific and technical areas of learning at second level.

## 3.5    Parental involvement and home-school linkage

The Primary School Curriculum emphasises that significant educational, social and behavioural benefits accrue to children as a result of an effective partnership between parents and teachers. Effective co-operation between the home and the school is essential if children are to be enabled to succeed in school to the fullest extent possible. The findings presented in this evaluation report suggest, however, that in more than two-thirds of class settings the effectiveness of linkage between home and school was fair or weak, especially in the middle and senior classes. Although many of the schools had undertaken action to promote a greater involvement of parents, most school personnel acknowledged that much more was required in order to achieve success. Several teachers praised parental involvement facilitated through the Early Start initiative. Many principals also acknowledged that some limited success has been achieved in encouraging parental involvement in their children's learning.

In most class settings, teachers noted that it was a considerable challenge to achieve a greater involvement of parents in the work of the school. Some teachers referred to poor attendance at parent-teacher meetings, especially in the senior classes, and it was frequently stated that while parents remain involved during the infant years, this is not sustained as the children progress through school.

School principals and teachers consider that the Home School Community Liaison (HSCL) service plays an important role in promoting the involvement of parents in the work of the schools. Class teachers commented that the scheme was an effective support in encouraging parents of younger children to become involved in literacy, and paired or shared reading was promoted in some schools. In one school parents were encouraged to become involved in the assessment process and liaised with class teachers in the analysis of a screening test. Very few parents were involved to any significant degree in the formulation of individualised programmes of work for pupils with special

educational needs. In a few schools the profile of numeracy among parents was raised through a "shared maths" initiative promoted by the HSCL teacher, class teacher, and learning support teacher. These teachers commented that this project was an excellent means of introducing parents to mathematics resources and of highlighting the importance of mathematics in the children's education. In several schools the HSCL service has been successful in accessing Vocational Educational Committee funding to provide a range of educational courses for parents.

The findings suggest that schools realise the importance of involving parents in their children's education. However, in many cases school initiatives in relation to parental involvement have limited success.

## 3.6    Staffing allocation and teacher turnover

Schools in areas serving disadvantage face serious challenges in respect of social and cultural disadvantage, perceived lack of parental interest and involvement in education, low achievement, and the large number of pupils who have very poor attendance levels. The Department of Education and Science provides additional staffing to schools to address these challenges, and in the twelve schools there was an overall pupil-teacher ratio of 11:1. There were 194 teachers allocated to these schools, and the total pupil enrolment was 2,132 on 3 September 2003. Ten of the twelve schools had an administrative principal. 119 teachers were recorded as allocated to mainstream class teaching duties.

42 teachers were allocated to learning support, resource teaching, or special class settings. Five schools had Early Start pre-school units (7 teachers). All twelve schools had access to a Home School Community Liaison (HSCL) service. Seven of the schools in the sample were base schools for a HSCL post. Table 3.4 below provides information on the allocation of teaching personnel to the twelve schools.

| | |
|---|---|
| Administrative Principal | 10 |
| Mainstream class teachers | 119 |
| Early Start | 7 |
| Learning Support, Resource, or Special Class | 42 |
| Language support | 2 |
| Resource teachers for Travellers | 4 |
| Supply panel | 3 |
| HSCL | 7 |
| Total allocation of teachers | 194 |

Table 3.4: Roles of teaching personnel in the twelve schools

School principals contended that the combination of challenging school context factors made it difficult to attract and maintain staff in some schools, and in a few of the schools teacher turnover presented the school management with serious difficulties in endeavouring to provide continuity of staffing. In one school with 24 members of staff 16 teachers had three years' teaching experience or less. In a few schools the principals were concerned at the difficulty in attracting trained and experienced teachers and maintained that retaining staff was an ongoing challenge. There were 18 (9% of the total staffing of the 12 schools) unqualified teachers employed in the schools during the

evaluation. Some teachers referred to the need to keep morale high among teachers in the schools, given the challenges presented by high teacher turnover.

## 3.7    Support initiatives for disadvantaged schools

All the schools evaluated receive additional supports to assist in meeting the needs of pupils, and almost all school principals and teachers were positive about the value of these initiatives. Seven of the schools participate in the Breaking the Cycle scheme, which provides for class sizes of 15 pupils up to second class and additional grant aid to schools. The schools are supported through the Giving Children an Even Break initiative. The School Completion Programme operates in ten schools and includes monitoring pupils' attendance in school and the provision of a breakfast to pupils each morning.

All the schools participate in the Home School Community Liaison scheme. Some of the schools have a shared HSCL service. The Early Start pre-school initiative is available in a few schools, and this support is generally acknowledged in the schools as very valuable in providing an enriching early educational experience for children before they enter junior infants. References were also made to the positive contribution of support teachers and special needs assistants in enabling schools to provide for pupils with learning disabilities and emotional and behavioural difficulties.

The principals emphasised the importance of links with external agencies, such as health and child-guidance services. Opportunities for teachers to consult speech and language therapists in order to share strategies aimed at pupils with speech and language difficulties were considered very useful. One school, which receives additional funding from the Ireland Fund, employs a speech therapist to help children with specific speech and language needs, and this is considered by the school to make a valuable contribution to its overall work in caring for its pupils. School principals also acknowledge the support provided through Local Area Partnerships and Local Drugs Task Force projects. A few schools have accessed funding for after-school clubs.

In a few schools, private industry has been very generous in supporting several educational projects, which have positive outcomes on school environments, pupil motivation, and teacher motivation. Two of the schools, for example, have received high levels of support from the Dublin Docklands Development Authority (DDDA). The support of the DDDA in funding professional development for teachers, in the development of ICT in the schools and in educational projects that impact directly on pupils was regarded as particularly valuable.

## 3.8    Professional development of teachers

Teaching in schools situated in areas of disadvantage requires a high level of professional competence. Class teachers were asked about their experience of professional development and whether or not they had availed of courses to enhance their teaching of literacy and numeracy. The vast majority of the teachers interviewed indicated that their initial teacher training did not prepare them sufficiently for the challenge of their present teaching situation and that their training was not an effective preparation for teaching in a disadvantaged setting. The teachers referred to their day-to-day practice in the schools as being very removed from theory addressed in colleges. Teachers referred to learning primarily from their own experiences, and a general sense of "learning as you go" was evident in some of the teachers' responses.

Several teachers made reference to aspects of professional development courses or professional experience that they had undertaken in the past that were of value in supporting their practice. Examples referred to included training for Early Start, summer courses, special education courses, induction courses for resource teachers, courses on dyslexia, Montessori training, circle time, and TEFL (teaching English as a foreign language) workshops. A few teachers praised the courses delivered as part of the Primary Curriculum Support Programme, including support provided by the Regional Curriculum Support Service (cuiditheoirí). Among the other supports referred to by teachers were the in-service courses offered by the HSCL scheme in the context of disadvantage, and events and briefings relating to Reading Recovery and Maths Recovery. Teachers also acknowledged the value of in-service courses on whole-school intervention and learning support provided by colleges of education. Very few teachers interviewed had attended an in-service course specifically aimed at the teaching of numeracy.

Most teachers stated that they were not aware of courses that would be of benefit to them in further developing their skills in the teaching of literacy and numeracy. The finding that teachers are not aware of where they can go to access professional development support focusing on literacy and numeracy warrants further examination. It may be that courses focusing on literacy and numeracy are not widely available or, if they are, that teachers find it difficult to get information on them. It is recommended that an internet-based database of service providers and courses be developed so that teachers and schools can easily access information on relevant courses that are available.

A few school principals expressed interest in availing of Reading Recovery or Maths Recovery programmes. There were also calls for more training for learning-support teachers in English and mathematics, more time to plan collaboratively, time to engage the support of the Regional Curriculum Support Service cuiditheoirí, and better opportunities for teachers to develop an understanding of disadvantage.

In evaluating the extent to which each school gave priority to staff development related to literacy and numeracy, inspectors focused in particular on staff development through collaborative planning, input from "experts" within or outside the school, or provision for attendance at courses on literacy and numeracy. In the majority of cases there was little evidence that the issue of staff development was prioritised in school plans. Approximately half the schools had undertaken some initiatives to upskill teachers by inviting experts to address staffs or by facilitating teachers in attending courses.

## 3.9 School-based variables that impact on literacy and numeracy

The challenging context in which these schools work and the many external factors that impact in a negative way on pupils' progress in learning, as outlined in the initial section of this chapter, were acknowledged by the evaluation team at all stages during its work. The evaluation focused on the decisions that schools can make about the quality of teaching, how teaching and learning are organised, managed and monitored, the quality of the resources, and the way in which schools manage their human and physical resources to support the teaching and learning. The remainder of this report focuses on the in-school variables that impact on provision for pupils in literacy and numeracy.

*The whole-school planning process should prioritise staff development and collaborative planning, focusing on strategic development and improvement.*

# 4 Planning for Literacy and Numeracy

## 4.1    Overview of whole-school planning

The introduction to the Primary School Curriculum emphasises the central role of whole-school planning in enhancing educational provision and in providing children with optimal learning experiences. The curriculum suggests that planning in the school is sustained by a vision of the child at the centre of the learning process, by high achievement expectations, and by the conviction that the planning process itself is vital in providing the child with curriculum experiences that are relevant and appropriate to his or her needs (*Primary School Curriculum, 1999*, p. 63).

Inspectors identified the characteristics of effective school plans. These plans

- encompass the principles of the curricular areas and are based on the Primary School Curriculum (1999),
- reflect the unique context of the school and the learning strengths and learning needs of the children,
- make optimal use of the expertise of the teaching staff,
- include action plans to ensure that specific targets in literacy and numeracy are set and that progress is reviewed on an ongoing basis,
- articulate an agreed approach to classroom planning (long-term and short-term) and to recording progress (cuntais mhíosúla),
- incorporate practical strategies to facilitate the involvement of parents in their children's learning,
- outline broad statements of content that are based on the strands and strand units of the curriculum in order to ensure progression and continuity, balance and breadth in the planned programmes,
- delineate teaching methodologies and organisational strategies that can be utilised at different class levels so that group work, whole-class teaching and work with individual children can be facilitated, and include reference to the use of resources and textbooks,
- provide guidance on how the curriculum can be adapted or differentiated for children with learning difficulties or special educational needs or children with exceptional abilities,
- outline the approaches to formative and summative assessment that will be adopted to provide accurate and ongoing information about an individual child's learning, and contribute to improvements in teaching and learning.

## 4.2    Whole-school planning for literacy and numeracy

### 4.2.1 The whole-school planning process

Most schools devised school plans for English and mathematics. In the majority of schools, whole-school planning was collaborative in nature, and the issues of literacy and numeracy were emphasised at staff meetings. Teachers stated that planning and review days, facilitated by PCSP and SDPS, were occasions when a number of useful ideas were agreed at whole-school level or by groups of teachers at particular class standards. However, inspectors commented that the quality of whole-school plans in some schools was poor, and there was evidence that some planning documents had not been discussed adequately. A few schools experienced high staff turnover, and

one inspector noted that in such a climate it was difficult to maintain a sense of ownership of the school plan on an ongoing basis.

The majority of principals indicated that a special-duties post in the school was related to literacy and numeracy. However, only half the special-duties postholders had responsibilities that were concerned with the development of teaching and learning in curricular areas such as the formation of policy and planning in literacy and numeracy. The remainder had duties that involved the purchase, maintenance and distribution of materials.

In a minority of schools the whole-school planning process was ongoing and systematic, and whole-school policies on literacy and numeracy were reviewed, developed, implemented and evaluated by the teaching staff over an extended period. In these schools, co-operative or team planning was undertaken under the direction of curriculum co-ordinators, who were usually postholders. The planning groups met to review progress and provided feedback at staff meetings.

### 4.2.2 Content of whole-school plans
Whole-school plans for literacy and numeracy generally reflected the principles and emphases of the *Primary School Curriculum 1999*. In junior schools, these literacy plans outlined strategies for supporting children's listening, phonological awareness, vocabulary development, and early reading skills. School plans also detailed agreed approaches to spelling, word identification skills, and the development of comprehension strategies. Decisions regarding the use of novels and textbooks and the grading of library books according to age and ability levels were recorded. Strategies such as DEAR (Drop Everything and Read), CAPER (Children and Parents Enjoying Reading) and USSR (Uninterrupted Sustained Silent Reading) were implemented at class level. In a few schools, attention was given to the development of assessment profiles to monitor children's progress in reading and oral language, and some school plans provided specific guidance on the writing process.

Most schools outlined whole-school plans for numeracy, and these schools indicated that they would continue to develop the mathematics plan in the future. Numeracy plans focused on the organisation of resources, the provision of concrete materials, and the establishment of tracking systems to manage equipment. In relation to the mathematics curriculum, emphasis was placed on the language of mathematics, the organisation of early mathematical activities, group work, concrete materials, the teaching of mathematical concepts, and learning number facts. Areas identified for future development included oral and mental arithmetic, problem-solving, shape, and measurement.

The quality of whole-school plans for literacy and numeracy varied from school to school. Approximately half the schools utilised background support material provided from sources such as the Primary Curriculum Support Programme and the School Development Planning Support initiative. Some school plans were general in nature and content-based and did not provide sufficient support for the effective implementation of the curriculum at classroom level.

A few teachers commented that school plans did not set out agreed approaches or teaching methodologies sufficiently. A few schools initiated some work in outlining agreed methodologies for literacy, and to a much lesser extent for numeracy, but these did not provide the necessary guidance

to support teaching and learning at different class levels. In a few schools teachers noted that systems were not yet in place for monitoring the effectiveness of new teaching methodologies.

Three-quarters of school plans had not developed a coherent and systematic approach to pupil assessment. Some school plans lacked specific reference to the role of learning-support teachers and resource teachers in developing pupils' literacy and numeracy skills. In the majority of cases the issue of staff development was not addressed in school plans.

### 4.2.3 Implementation of whole-school plans for literacy and numeracy
Most class teachers reported that whole-school policies influenced their teaching and made a positive contribution to children's learning. The vast majority of teachers stated that they were informed about the school policy in English and mathematics, and some teachers indicated that the school plan directed teachers to relevant materials and resources available in the school. Other teachers used the school plan as their long-term scheme, and they indicated that this ensured that the work of the school was co-ordinated.

However, inspectors found that there was limited evidence to indicate that school plans for English and numeracy directly informed classroom planning. Only a quarter of teachers were successful in basing their individual preparation for English on the whole-school plan. About 40% of teachers used the whole-school plan for mathematics to inform their preparation. Planning based on textbook content rather than on learning objectives was reported to have a negative impact on the balance and sequence of the mathematics and literacy programmes.

### 4.2.4 Reviewing plans for whole-school development and improvement
During the school year 2003/04 schools availed of in-school planning and review days that provided teaching staffs with opportunities to review curricular plans drafted to date and to reflect on the implementation of curricular areas for which in-service support had been provided.

While some schools devised action plans in which literacy and numeracy targets were identified, action planning priorities were reflected in only one-third of teachers' long-term and short-term planning. The majority of teachers did not set specific targets for the class group and for individuals as a focus for raising overall literacy performance. Most schools did not have a systematic, documented approach to monitoring for school improvement.

All schools had procedures in place to assess the quality of children's learning. These procedures included standardised tests, teacher observation, questioning, teacher-designed tests, error analysis, homework, work samples, and check-lists. Inspectors noted that school plans should support a policy of early intervention in relation to low achievement in literacy. There was no evidence in school plans that assessment data was used in planning for improvement in children's learning.

During interviews with principals, the further development of school planning processes and supports was identified as the major issue facing school management. Several school principals suggested that management support for whole-school planning and the creation of additional time and support for in-school co-operative planning was essential. One principal referred to the positive contribution of the school's board of management in requesting that the teaching staff focus on literacy and numeracy and the further development of a culture of assessment, monitoring and

reporting in the school. It was also suggested that the school management should have an active part to play in monitoring the quality of educational provision in the school and that the board and in-school management personnel should continue to focus on improving standards.

## 4.3    Summary and recommendations

Literacy and numeracy are key priorities in the curriculum, and the acquisition of literacy and numeracy skills is central to effective learning in every area of the curriculum. The majority of schools in this evaluation engaged in collaborative planning, but much whole-school planning required a clearer focus on the quality of learning outcomes.

Some school plans had little impact on the quality of teaching and learning, and the linkage between planning, implementation, review for development and improvement was not sufficiently established. The continuing professional development of staffs was not identified as a main concern for schools, and little attention was given to the development of the professional expertise of teachers in implementing curriculum change. The potential for teachers with management responsibilities to contribute to the process of whole-school improvement was not realised in most schools. Boards of management and in-school management did not engage in a systematic way in monitoring the quality of educational provision in schools. The low achievement of children in literacy and numeracy was not addressed in a focused, targeted way in most schools.

**Recommendations**

The following recommendations were made by inspectors with a view to improving the quality of planning for literacy and numeracy:

- Additional, non-contact time is required in schools to support engagement in whole-school planning and review, and it is therefore suggested that all the education partners should give consideration to ways in which sufficient time can be made available for essential collaborative planning in schools.

- There is a need to delegate specific curriculum leadership and whole-school co-ordination responsibilities when drawing up the duties for in-school management team members.

- The principal and in-school management team should take a leading role in sustaining an effective planning process, aimed at ensuring clear links between whole-school planning, individual teachers' preparation and everyday practice in relation to teaching literacy and numeracy.

- Teachers' planning should incorporate differentiated approaches to a much greater degree in order to cater for all pupils, including those with special educational needs. Teachers should set specific targets to cater for the individual needs of children who are experiencing difficulty with literacy or numeracy skills development and draw up action plans for the realisation of these targets. Textbooks should be used as resource material to support the implementation of the curriculum, rather than the basis of the planning for curriculum delivery.

- A review of the Department's staffing allocation policy in relation to the appointment of administrative principals in schools serving areas of disadvantage should be considered in order to facilitate all school principals in concentrating on their leadership duties and engaging in strategic school-planning and management activity on a full-time basis.

- Consideration should be given to the establishment of a group of curriculum support teachers with specific expertise in literacy and numeracy who would provide direct support to designated schools that have prioritised the development of provision for literacy and numeracy. The service should aim to assist school principals and teachers in developing strategies aimed at improving children's achievement and should also model appropriate teaching and assessment methodologies in classrooms and disseminate good practice among support teachers. The support should be available to a school for a defined period.

- Mentoring programmes should be introduced to support the induction of inexperienced or newly qualified teachers.

- Pre-service and continuing professional development providers should assist teachers in working as reflective practitioners. Course content should focus on the development of self-evaluation skills and should incorporate guidance in relation to planning and to monitoring the quality of teaching, learning and assessment in the context of educational disadvantage.

*A systematic range of teaching approaches to reading, that includes whole-class teaching, group work and attention to individual pupils based on their learning needs, is required.*

# 5 Teaching and Learning: Literacy

## 5.1 Classroom planning for teaching and learning

Good-quality reflective teaching is a cyclical process whereby teachers monitor and evaluate their planning and the learning experiences and activities that they provide for children. They analyse the quality of children's learning, and they assess and record children's progress, including their acquisition of knowledge, skills, and understanding. This chapter focuses on the essential elements of the teaching and learning process. It addresses the quality of planning, the effectiveness of teaching methodologies observed, and the quality of children's learning in literacy. The role of assessment in the teaching and learning process is considered, and the support for children with specific learning needs is appraised.

This evaluation highlighted significant weaknesses and gaps in the cyclical process of planning, teaching, and assessment. Inspectors found that the quality of classroom planning for literacy was either weak or required development in the majority of class settings evaluated. As noted in Chapter 4, in a quarter of disadvantaged schools whole-school action plans prioritised literacy, but these planning priorities were not reflected in most classroom teachers' short-term and long-term planning. Most teachers provided long-term planning, usually presented as yearly or termly plans. However, inspectors noted that in more than half of the classrooms visited these long-term plans were general in nature, were not sufficiently based on the curriculum and stage of development of children, and were not an effective support in the implementation of a systematic programme in literacy.

Significant weaknesses were also found in short-term planning in the majority of the classrooms visited. A small number of teachers set targets in their planning for raising overall literacy performance for their class group and for individual children presenting with literacy difficulties. These short-term plans were not sufficiently focused on the specific objectives of the curriculum and did not reflect continuity and progression in teaching and learning. Most teachers did not utilise the information provided by the outcomes of assessments to inform their short-term planning.

## 5.2 Quality of teaching and learning

### 5.2.1 Classroom environment and resources

Thirty-one literacy lessons were observed during the evaluation. Most teachers were effective in maintaining discipline and in promoting positive behaviour management strategies during these lessons. Most infant and junior classrooms were equipped with very good-quality teaching and learning resources. However, there was a significant decline in the range of resources available to teachers in middle and senior classes, and only one-third of these classrooms were described as having a satisfactory level of resources. The majority of infant and junior classrooms had good or very good displays of children's work, and personal and creative writing, book reports and poetry were displayed. However, a significant deterioration in the display of children's work was noted in middle and senior classrooms, with three-quarters of these class settings identified as needing significant development in this area. Most infant and junior class teachers were successful in creating stimulating print-rich learning environments where children were exposed to charts, posters and labels, high-frequency words,

word families, individual words and full sentences on display. Satisfactory print-rich environments were in evidence in less than half the middle and senior classrooms visited.

Most infant and junior classrooms had good or very good libraries that were stocked with supplementary reading materials, such as parallel readers, big books, high-interest/low-ability texts, novels, and real books. Children progressed systematically through a developmentally sequenced range of reading materials. Approximately two-thirds of the libraries in middle and senior classes were described as limited. Concerns were expressed regarding the inadequate supply of books that were available for children's independent reading. In a small number of classrooms, access to books was difficult as they were stored in central locations outside the classroom. Inspectors recommended the provision of a wider range of books, which would include good-quality texts, including expository, narrative, diagrammatic and representational texts, to facilitate the development of children's independent reading and group reading.

### 5.2.2    Quality of teaching

The quality of the lessons observed was good in most classes, but very few lessons were reviewed where the quality of teaching and learning was judged to be at an optimal level. A variety of activities was observed throughout the strands of the curriculum in English, and most infant and junior class teachers integrated oral work, reading and writing successfully. Most teachers were commended for implementing a systematic range of teaching approaches to reading, and these included whole-class teaching, group work, and individual attention. Silent reading, paired reading and the involvement of parents in shared reading had been introduced. The majority of teachers placed commendable emphasis on the development of phonological awareness skills and sight word knowledge and encouraged children to read during literacy lessons.

Effective teachers were observed to ask reflective questions and to utilise a range of questions to nurture children's comprehension skills. They discussed the texts with the children and encouraged silent reading. Most effective teachers based their planning on the individual needs of the children and reflected the principles of the English curriculum in their teaching and planning.

The quality of literacy teaching in the middle and senior classes was good, and all class teachers were successful in presenting structured reading lessons. The development of word-identification skills, such as syllabication, to decipher unfamiliar vocabulary was emphasised in most classrooms. In more than half the classes children were exposed to a variety of reading genres. Most children engaged in recreational reading, and in all classes children read on a daily basis. In a minority of classrooms inspectors noted that the reading material was too difficult for the children. In the middle and senior classes most teachers adapted the reading materials to the ability level of the children, and in general very good emphasis was placed on developing comprehension skills. Higher-order thinking skills were emphasised well in two-thirds of classes.

The teaching of handwriting skills was good. Evidence from children's copies indicated that children's experience of writing tended to take the form of responding to comprehension-style questioning. Only 16% of children in middle and senior classes wrote in a variety of genres. Inspectors recommended the promotion of a process approach to writing, the introduction of children to writing for a variety of purposes and audiences, and the scaffolding of children's written work. A few inspectors commented favourably on the teaching of grammar.

In a minority of class settings the quality of lessons observed was poor. These lessons were characterised by the use of a restricted range of teaching approaches and a general lack of opportunities for children to engage actively in their learning. In these settings, inspectors noted a lack of attention to curriculum differentiation and to the individual learning needs of children, drab classroom environments, lack of prioritisation of literacy in the curriculum programme, and insufficient classroom planning. Many of the teachers interviewed appeared to be unaware of continuing professional development courses that could further develop their skills in the teaching of literacy.

### 5.2.3    Quality of learning

Inspectors indicated that most children experienced some success during the literacy lessons observed at all class levels. Three-quarters of children in infant and junior classes were interested in the lessons and engaged in meaningful age-appropriate reading activities. Children demonstrated an awareness of print and the conventions of print, and they engaged with stories and rhymes. Teachers commented that oral language development received much attention, and this improved classroom learning experiences for the children.

More than two-thirds of children had learned word-identification skills and could apply these skills in identifying new words. However, despite the acquisition of these reading skills, less than two-thirds of the children (58%) were observed to read fluently and discuss the text with understanding. This finding is linked closely to the number of teachers who differentiated their teaching. Half the infant and junior class teachers observed adapted their approach effectively to teaching reading to meet the individual needs and learning strengths of the children. In these classes the children demonstrated a willingness to engage in literacy tasks, both independently and in groups. Teachers and inspectors alike commented that the promotion of a differentiated approach helped to ensure that children experienced success.

Inspectors commented on a decline in the rate at which the children in the middle and senior classes were achieving mastery in literacy relative to children in infant and junior classes. One inspector reported that while "some children read with fluency and accuracy, many children display limited understanding of the texts and comprehension skills are limited." Inspectors acknowledged that teachers were aware of the need to develop the pupils' comprehension skills, including their ability to assimilate, deduce, predict, and summarise. Although most teachers utilised class novels, class readers and a limited selection of library books in developing these skills, fewer than half the children in middle and senior classes could read fluently and discuss the text with understanding. More than one-third of children were described as being independent readers, but most children (84%) were unable to analyse the material they had read. Some inspectors and teachers raised concerns about the motivation levels and the lack of independence among children as learners.

## 5.3    Assessment

All the schools administered standardised tests to ascertain the reading achievement levels of pupils. Eight of the other schools tested annually, three schools tested every two or three years, and one school tested bi-annually Inspectors found that in almost all class settings (90%) the provision of a coherent approach to the assessment and monitoring of children's progress was very weak and required significant development. The majority of teachers were rated as experiencing significant difficulty or requiring development in the area of organising assessment information about

individual pupils, in recording the results of formative and diagnostic tests for individual children, and in maintaining records on individual pupils.

Inspectors found that most class teachers used general forms of assessment (teacher-devised tasks) with their children as a group, and some records of these assessments were maintained. These consisted of records of spelling tests and results of reading assessments. Inspectors noted that general records of children's progress were maintained, but these did not give sufficient details of individual children's strengths and weaknesses. Samples of pupils' work were corrected in approximately half the classrooms visited and progress discussed with parents. The majority of inspectors commented that the samples of work reviewed did not reflect growth in confidence or progression among the pupils.

In a minority of classrooms there was evidence of good practice in relation to the assessment of individual children's progress. Where good practice was noted, inspectors referred to the maintenance of individual children's records, attention to differentiation, the use of a range of assessment strategies, the maintenance of pupils' work samples, and the results of teacher observation and teacher-designed tasks. Teachers retained individual children's reading record cards and check-lists to review progress in relation to areas such as word recognition, word families, letter-sound relationships, visual discrimination, and sight words known by the pupils. Some teachers recorded the books read by each child and undertook error analysis at intervals. Records of diagnostic tests were also maintained. However, even when a range of assessment strategies was undertaken, inspectors noted that there was little evidence to indicate that the results of these assessments were used to inform the planning, teaching, and learning.

## 5.4   Supporting children with learning difficulties

Among the twelve schools evaluated, an average of one-fifth of children received supplementary teaching in literacy. Approximately one-tenth of children were identified as having special educational needs and were in receipt of resource teaching support in English. More than half the schools maintained individual profiles and learning programmes (IPLP) for children with learning difficulties or children with special educational needs. A small number of classroom teachers retained copies of these plans, and inspectors considered that this was an indicator of good practice. Fewer than half of these plans included targets and strategies for literacy development and outlined the resources that were utilised to support children's learning and a record of the results of standardised tests. Inspectors noted that most class teachers were not involved in the formulation of such plans and that there was little evidence of collaboration between class teachers and the members of the special education needs team. The sections of the IPLP relating to the class teacher and linkage with parents were not completed in most of the individual plans reviewed, and inspectors noted that there was a lack of a co-ordinated approach between the classroom teacher and the learning-support and resource teacher in the provision of literacy support for children with learning difficulties. Common objectives and approaches, a complementary programme, agreement on texts to be read, coherence in the assignment of homework and optimal use of pupils' time were recommended by one inspector as elements of a co-ordinated plan.

There was limited evidence of learning-support and resource teachers working in the classroom setting, and the identification of attainable time-related targets for children with special needs was undertaken in a minority of schools. Where effective learning-support teaching and resource

teaching were observed in schools, inspectors noted that the features of their good practice included the provision of good-quality individualised pupil profiles that displayed a clear understanding of the pupils' needs and potential, clearly identified the strengths of each individual child, and outlined suitable learning targets for these pupils. Good practice was highlighted where support teachers maintained appropriate records of children's progress and retained detailed records of the supplementary teaching programme. Competent learning-support and resource teaching involved using a range of appropriate assessment modes and using the results of assessment to inform teaching and learning in the supplementary teaching context.

## 5.5 Summary

The evaluation of practices related to the teaching of literacy provides evidence that classroom planning and assessment policy and practice are aspects of provision in schools that require significant attention and improvement. While lesson presentation was evaluated as good, inspectors raised concerns about the outcomes of learning. Fewer than half the children in middle and senior classes were able to read fluently and with understanding. Inspectors commented on good practice that was characterised by good-quality planning, the provision of differentiated activities, and the motivation and engagement of children in their learning. However, common gaps in provision included the absence of a co-ordinated approach to assessment and recording of pupils' progress, lack of linkage of the outcomes of assessment with the teaching and learning process, and the uncoordinated provision for children with special needs and learning difficulties. Inspectors highlighted the need for more effective approaches to curriculum adaptation or differentiation, the provision of a greater range of reading materials, and the creation of more stimulating learning environments.

**Recommendations**

The following is a summary of the main recommendations made by inspectors following their visits to classrooms:

Classroom planning for teaching and learning

- Class teachers, principals and those with in-school management responsibility in schools serving disadvantaged areas should come to a shared understanding of the interrelatedness of planning, teaching, learning and assessment in the teaching and learning process. This should provide a basis for effectively meeting the learning needs of children and for enhancing their achievement in literacy to the greatest extent possible.

Classroom environment and resources

- The provision of a wider variety of reading materials in each classroom, and the enhancement of the classroom environment to reflect the fact that literacy is a priority, is recommended.

Planning

- The provision of more planning is not recommended by this evaluation: rather, the planning provided should be focused and practical. It should contribute to more effective teaching practices and enhance the quality of learning. Whole-school action planning should prioritise literacy and should be reflected in teachers' short-term and long-term planning. Long-term

planning should be based on the curriculum and should take account of the stage of development and learning needs of the pupils.

- Short-term planning should focus on the specific objectives of the curriculum and should facilitate continuity and progression in teaching and learning. Short-term plans should identify expected outcomes of learning and support the development of targeted learning activities for pupils.

- Targets should be set for the class group and for individuals as a focus for raising overall literacy performance, and pupils should be made aware of these targets.

- Planning for individual children and groups of children should be undertaken in a way that ensures that class teaching will be differentiated to meet their needs.

- Teachers' monthly progress records, the results of assessments and children's progress records should inform teachers' short-term planning.

### Supports for children with learning needs

- The school plan should set out an approach to early intervention in relation to low achievement in literacy.

- Class teachers and support teachers should collaborate monthly on individual plans to support the learning needs of children receiving additional supports.

- The provision of supplementary support for children should be co-ordinated effectively to ensure that only one support or resource teacher is involved with each child and to ensure effective liaison with the class teacher and with individual parents.

- Class teachers and support teachers should maintain more comprehensive records of children's progress.

### Assessment

- Schools should have a whole-school policy and a systematic and coherent approach to assessment and recording of pupils' progress at classroom level.

- The outcomes of assessment should inform the teaching and learning process.

### Parents

- School policy should support effective collaboration between teachers and parents, and parents' involvement in the development of individual learning programmes for children who require supplementary teaching should be facilitated.

*'Shared maths' initiatives which involve class teachers, learning support teachers, HSCL teacher and parents raise the profile of numeracy in children's education and introduce parents to mathematics concepts and resources.*

# 6 Teaching and Learning: Numeracy

## 6.1 Introduction

Inspectors evaluated the quality of numeracy teaching and learning in thirty-five classrooms and reviewed planning documents provided by teachers. This planning included long-term and short-term written preparation, monthly records of completed work, individual education plans, and assessment records. The quality of the learning environment and the use of concrete materials and resources in the mathematics lessons were evaluated. Assessment practices in individual classrooms and in schools were considered, and the procedures in place for pupils with special needs were reviewed. The chapter concludes by outlining a summary of the main findings relating to numeracy and by detailing specific recommendations.

## 6.2 Planning for teaching and learning in numeracy

The majority of teachers provided timetables, long-term planning and short-term planning for numeracy. Inspectors noted, however, significant differences in the nature and effectiveness of written preparation. Where good practice was in evidence, teachers provided plans that reflected the curriculum and stage of development of the pupils. Where planning was weak, inspectors noted that it did not provide teachers with effective guidance and appropriate support in meeting the specific needs of the pupils in mathematics. These plans did not provide evidence of how the curriculum was differentiated to meet the needs of pupils with learning difficulties.

Overall, the review of planning documentation indicated that more than half the planning was weak or had scope for development. The following issues were of concern:
- Fewer than half of the teachers based their short-term planning on the specific content objectives of the Primary Curriculum. The majority of short-term plans do not facilitate continuity and progression in teaching and learning.
- Only a few teachers provided written preparation for individual pupils or groups of pupils so that class instruction would meet their learning needs.
- Whole-school action planning priorities were reflected in fewer than half the teachers' long-term or short-term planning.
- Fewer than half the teachers set learning targets in numeracy for class groups or for individual pupils.

## 6.3 Quality of teaching and learning in numeracy

### 6.3.1 Classroom environment and resources

Almost all teachers observed interacted with pupils in a caring and supportive manner and were successful in fostering a positive classroom atmosphere. Inspectors noted that teachers created well-organised environments and, in general, gave clear guidance for pupils in relation to effective co-operation with others. Teachers' awareness of classroom interactions, continual monitoring of pupils, careful pacing of lessons and the use of appropriate praise were factors associated with the promotion of a positive atmosphere and well-managed classrooms.

Pupil misbehaviour was a significant challenge for teachers in just a few classrooms, with constant

disruption and inattention causing frequent interruption to the flow of teaching. Among the weaknesses in classroom management approaches identified were a lack of clarity with regard to the purpose and structure of lessons, the adoption of inappropriate teaching approaches, and treating fleeting interruptions as major breaches of class rules. In a few instances, where classroom activity was very teacher-centred, the opportunities for effective pupil-pupil interactions were impeded.

A "mathematics-rich" environment, which was characterised by good access to mathematics resources for teaching and learning, was noted in approximately half the classrooms visited. In a few classes the environment was enriched through the creation of a dedicated mathematics area and through prominent displays of illustrative materials. Inspectors commented on some very good examples of effective explanatory charts and on the very good organisation of resources in just over half the class settings.

In a significant proportion of classrooms a lack of curriculum charts or graphic materials to support lesson presentation in mathematics and limited provision of concrete materials were highlighted as significant areas requiring improvement. In two-thirds of class settings inspectors reported that there was scope for development in the display of pupils' work in mathematics and in the use of ICT resources to enhance learning.

### 6.3.2   Quality of teaching

Where reported, almost all teachers devoted appropriate time to the teaching of numeracy. Inspectors commented that a range of teaching styles and methodologies was employed, including teacher-directed questioning and group work, where collaboration among pupils was a feature. Good teaching was characterised by the communication of clear expectations, pupils' learning was scaffolded throughout the lesson, and pupils collaborated with each other and with the teacher. More than three-quarters of class teachers paced their lessons appropriately and engaged pupils in suitable activities. Most teachers used activity methods whereby the pupils engaged with concrete materials during lessons. However, only a quarter of teachers were successful in adapting their teaching to the individual abilities of the pupils.

Most teachers placed commendable emphasis on the development of mathematical language, on learning facts, and on establishing the skill of estimation. Teachers monitored pupils' work regularly. The following comment from an inspector typifies the work of teachers at the highest level:

> There is an admirable emphasis on linkage between number and shape and the pupils are actively engaged in their learning. Whole class teaching is well conducted. Work is carried out with groups and individuals as is necessary. Pupils are encouraged to think about their mathematics.

Practice in approximately one-quarter of classroom settings, however, showed considerable scope for development. Teacher-dominated discussion, whole-class teaching and the insufficient use of concrete materials during the lessons were features of practice that had scope for development. In these instances, teachers were encouraged to place greater emphasis on the use of manipulative materials and to provide further opportunities for pupils' participation. Concern was also expressed at the lack of cross-curricular work organised by teachers.

### 6.3.2   Quality of learning

The quality of pupils' learning in mathematics was considered weak in the majority of class settings evaluated. Inspectors reported that most pupils made a good start to the learning of mathematics in the infant and junior classes, where there was good direction of activities by the teacher and pupils' learning was facilitated by the extensive use of concrete materials. However, while inspectors noted some areas of achievement by pupils in mathematics in the middle and senior classes, they also identified a number of areas of difficulty. These included a poor understanding of place value and poor estimation and problem-solving skills, and 44% of pupils did not know basic number facts. More than half the pupils (54%) were able to compute accurately. In the majority of classrooms appropriate emphasis was not given to differentiation of tasks to meet individual needs and to the provision of opportunities for pupils to learn mathematics using information and communication technologies. Inspectors noted that concepts had not been consolidated and that pupils had difficulty recalling material that had been taught in previous weeks. Inspectors commented on the lack of consolidation and revision and found that fewer than half the teachers established linkages between the strands of mathematics.

Many inspectors noted that the majority of mathematics lessons observed were effective, but there was a mismatch between teaching and the learning outcomes of the pupils. Teachers were conscious of low pupil achievement in mathematics, and fewer than half the teachers interviewed reported that pupils' learning experiences had improved. Where improvements were noted, reference was made to growing pupil confidence levels. Teachers attributed this success to an increased emphasis on oral language development.

Where pupils were not progressing or acquiring mastery of mathematical skills there was some evidence of uncoordinated provision for numeracy, poor learning environments, lack of appropriate assessment tools and strategies, an over-reliance on textbooks and workbooks, and poor lesson planning.

## 6.4   Assessment

Only one-quarter of schools had developed a coherent and systematic approach to pupil assessment. Most schools undertook some form of standardised testing on an annual basis, but the results of these tests were not reviewed as part of the planning process, and assessment information was not collated and analysed on a whole-school level. Inspectors noted that where teachers had copies of class results on standardised tests, this information was not used to plan interventions for pupils performing poorly on these tests. The maintenance of assessment information and record-keeping in relation to individual pupils was weak in more than two-thirds of classes. Formative and summative assessment results were not retained in individual pupil records. Good practice in the maintenance of well-organised, easily accessible and securely stored pupil files was evident in fewer than half the classrooms.

## 6.5   Supporting pupils with learning difficulties

In a few schools, inspectors praised the provision for pupils with learning needs in mathematics. Effective practice was associated with good co-ordination of the work of class teachers and learning-support teachers and with the development and implementation of individual plans for

pupils. In one case of good practice the learning-support teacher provided in-class support for the pupils. However, in half the schools inspectors reported that learning-support provision was not available for pupils with learning needs in numeracy.

Many inspectors commented on the lack of individually planned programmes for pupils with learning difficulties in mathematics. There were very few references to individual profiles and learning programmes. This lack of differentiation in meeting the learning needs of individual pupils, even where pupils were given time and attention on an individual basis, was raised by a number of inspectors.

In most settings, inspectors highlighted the need for a more co-ordinated and integrated approach for pupils with learning needs in numeracy. Although teachers work together on an informal basis, inspectors suggested that improved formal collaboration between class teachers and learning-support teachers in planning and in the delivery of focused support programmes was necessary. The involvement of class teachers in focused planning for pupils with learning-support needs was identified as an area of significant weakness.

In one setting, concern was raised in relation to individual children receiving support from a number of teachers. One child stated: "I didn't get time to finish this, because I go out to three teachers." The comment highlights the need to ensure an integrated and co-ordinated educational experience for pupils and the school's responsibility for ensuring that teachers provide an effective bridge between the programme of supplementary support and the child's work in his or her class setting.

## 6.6    Teacher perspectives on teaching and learning in numeracy

Many of the teachers and principals interviewed as part of this evaluation highlighted a lack of support in the home for numeracy as a serious impediment to improvement. In teachers' views, many parents have very poorly developed numeracy skills and are therefore unable to provide assistance to their children. Some schools, usually under the direction of HSCL co-ordinators, have devised strategies to compensate for this situation. In one instance "maths for fun" activities have been introduced, and another school is in the process of developing a video aimed at providing parents with guidance in assisting their children in the completion of homework.

Teachers also called on the DES to provide more support for numeracy by means of training and personnel. Teachers, particularly in junior schools, requested the introduction of a third year for infant pupils. This, they argued, would allow schools to tackle issues around language delay, which is believed to be one of the root causes of many of the difficulties associated with literacy and numeracy.

## Summary comments relating to teaching and learning - Numeracy

In general, good practice in mathematics lessons was associated with purposeful planning, well-structured learning tasks, the use of a suitable mix of whole-class, group and individual teaching, and good assessment practices. Pupils engaged enthusiastically in assigned tasks and displayed an appropriate understanding of mathematical language and concepts. It is interesting, however, that even where optimal teaching practice is reported, no inspector comments on very high standards of achievement.

Inspectors remarked that some teachers were adhering quite closely to a number of the main principles of the curriculum, such as activity methods, and the use of resources with suitable emphasis on the correct use of mathematical language. However, while lessons were conducted purposefully and to good effect, the overall knowledge of pupils in relation to important areas of the mathematics curriculum was quite limited. Lack of understanding of whole number and place value, poor understanding of the decimal system and the links with fractions and percentages and very poor retention of the basic information relating to measurements all indicated that pupils have failed to fully comprehend these important aspects of the programme.

In a minority of classes, inspectors report on poor planning, lack of adequate teaching resources, and very little understanding of principles such as experiential learning, guided discovery, differentiation, and the correct use of mathematical language. In these classes inspectors note that there is very little emphasis on meaningful assessment of pupils' progress.

### Specific recommendations - Numeracy

The following is a summary of the main recommendations made by inspectors following their visits to classrooms:

### Classroom environment
- In relation to approximately half the schools, inspectors make reference to the need to create an environment that would provide support in consolidating concepts presented during the mathematics lessons.

- There is a greater need for pupils' work in numeracy to be displayed.

### Planning
- Teaching methodologies and strategies should be described in the school plan, and, to the extent that it is appropriate, all teachers should implement these methodologies and strategies in their teaching, so as to ensure continuity in planning the instruction from class level to class level.

- Planning should be more detailed and should set specific, time-related learning goals for lessons. Progress towards the achievement of these goals should be monitored and reported.

- Some pupils require a much greater level of differentiation, and this should form part of the formal classroom planning. The development and use of IPLPs for individual pupils in classes was also recommended.

- There should be better linkage between the curriculum, school plan, and teachers' long-term and short-term planning.

### Teaching and learning
- Extensive practice is required in developing mathematical skills within all strands of the curriculum, and the teaching of mathematical processes such as understanding and recall, and using strategies and implementing procedures, should be undertaken in a systematic way.

- Pupils should be encouraged to use a range of reasoning and problem-solving strategies. Problem-solving tasks based on the learning needs and experiences of the pupils should be provided. Learning experiences in this area should not be confined to the limited range of problems presented in textbook materials.

- More emphasis should be placed on place value and work with decimals and fractions, and additional attention should be given to the linkage of concepts and the application of these concepts.

- The creation of linkage between all the strands of the curriculum is recommended.

- Learning tasks should be differentiated to take account of individual differences and to allow pupils to experience success.

- Greater collaboration between class teachers and support teachers is required.

### Assessment

- Scores on standardised tests should be analysed and discussed on a whole-school basis. Pupils' results on these, and on teacher-devised tests and formative assessments, should be the focus of strategic initiatives throughout the school.

- More emphasis should be placed on the recording of pupils' progress in mathematics.

*Formal collaboration between class teachers and support teachers in planning and delivering focused supplementary teaching programmes that are connected to and contribute to the child's work in the class setting is required.*

# 7 Assessment in Literacy and Numeracy

## 7.1 Whole-school approach to pupil assessment

Issues related to formative and summative assessment have been discussed to some extent in earlier chapters. Assessment processes are of fundamental importance to successful teaching and learning. This chapter provides some further analysis of the findings and examines the implications for practice in schools.

In the *Primary School Curriculum—Introduction (1999)*, assessment is considered to be central to the process of teaching and learning.

"It is used to monitor learning processes and to ascertain achievement in each area of the curriculum. Through assessment, the teacher constructs a comprehensive picture of the short term and long-term learning needs of the child and plans future work accordingly. Assessment is also used to identify children with specific learning difficulties so that the nature of the support and assistance they need can be ascertained, and appropriate strategies and programmes put in place to enable them to cope with the particular difficulties they are encountering."

The twelve schools included in this evaluation have a significantly higher proportion of children who perform in the bottom quintile on standardised tests in literacy and numeracy than schools in more advantaged areas. Against this backdrop, inspectors were asked to review the schools' policies and procedures in relation to assessment at whole-school level, at individual class level, and for children attending learning-support or resource teaching.

The majority of schools administered some form of standardised tests to ascertain the competencies of children in reading and mathematics. Various test instruments were used to provide information about pupils' overall ability and to screen children in the early years of school. In general, class teachers in collaboration with the learning-support teachers administered these tests. The frequency of such testing varied from school to school, with the majority of schools testing annually. Other forms of assessment used in schools included teacher-designed tests, check-lists of concepts or skills mastered by the pupils, informal teacher observation, criterion-referenced tests, pupil profiles, oral examinations, samples of pupils' work, tests in workbooks or textbooks, projects, observation schedules, speech and language observation schedules, and a range of diagnostic tests.

Concerns were expressed that there was significant scope for development in most whole-school planning documents reviewed, and the formulation of a whole-school policy on assessment and record-keeping was recommended. Inspectors advised that due consideration should be given to developing a systematic approach to pupil assessment in the school plan, which in turn would be reflected in teachers' plans. In the development of a school policy on assessment and record-keeping, it would be necessary to highlight how and when the different tools of assessment might be used, how children's individual progress would be recorded, and how and where these records would be stored. While all schools provided some feedback to parents regarding their children's progress, a practice of in-school reporting in relation to assessment outcomes had not been developed. In a few schools there was a coherent and systematic whole-school approach to pupil assessment,

and optimal practice was observed in relation to the use of assessment data. In these settings, pupils' progress records provided the focus for strategic initiatives throughout the school, and more effective approaches to curriculum differentiation and targeted teaching ensued.

## 7.2    Assessment at class level

In a significant minority of classrooms there was evidence of good practice in relation to the range of assessment tools that were used. These included frequent monitoring of written work, teacher observation, teacher-designed tasks, monitoring of homework, error analysis, check-lists for recording progress in relation to mastery of specific objectives, samples of children's work, standardised tests, and diagnostic tests.

Where competent practice was noted, inspectors referred to the maintenance and review of individual children's records, attention to differentiation, and long-term and short-term plans that linked children's learning outcomes, teaching approaches, and the use of curriculum resources. In general, however, most of the evaluative statements made by inspectors suggested that assessment policy and practice were aspects of provision that require significant attention and improvement. They recommended that criterion-referenced testing should be undertaken systematically in order to provide effective feedback to the teachers on the implementation of literacy and numeracy programmes, and that pupils' achievement as measured by the various assessment tools should be a focus for classroom planning.

Curriculum differentiation, arising from the detailed examination of the outcomes of assessment, was an area that featured to a significant degree in inspectors' recommendations. The development of effective policies for curriculum differentiation at whole-school level was advised, and the need for greater collaboration between class teachers and learning-support or resource teachers was highlighted. In the majority of class settings the need for more effective targeted planning for the learning needs of individual children in mathematics was advised. The need to link target-setting, the achievement of objectives and an effective monitoring and assessment procedure was also recommended. Inspectors noted that in some cases programmes inappropriate to the needs of children were followed, and the suggestion was made that teachers could benefit from access to external expertise to assist them in building their own competence in programme planning for children who are low achievers in literacy or mathematics.

Recommendations in relation to assessment were linked closely to the need to pay greater attention to the progress of every pupil, and to the need to have a clear picture of individual strengths and weaknesses. Schools were encouraged to adopt coherent approaches that would ensure that a range of appropriate assessment tools would be used that would impact on planning for formative development in pupils' engagement with mathematical skills and concepts. It is not intended that assessment policies and practices in schools should add to the administrative tasks of teachers, principals, learning support teachers, and resource teachers. Assessment, rather than detracting from teaching time, should be frequent and varied and form an integral part of the teaching and learning cycle. The results of assessment should affect teaching practices and enhance pupil learning. This evaluation found that this was not happening to a sufficient degree in these schools.

## 7.3    Assessment of children with learning difficulties and special educational needs

In general, the competent and effective practice of the majority of resource teachers and learning-support teachers in relation to assessment was recognised. Features of good practice included the good quality of individualised pupil profiles where support teachers displayed a clear understanding of the pupils' needs and potential, clearly identified strengths of each individual child, and identified suitable learning targets for these pupils. Good practice was highlighted where support teachers maintained appropriate records of children's progress and retained detailed records of the supplementary teaching programme. Effective learning-support and resource teaching included the use of a range of appropriate assessment modes and the use of assessment results to inform teaching and learning in the supplementary teaching context. Shortcomings were noted in a minority of settings where assessment results were not linked with individual pupil profiles and learning plans as recommended in the *Learning-Support Guidelines (2000)*.

## 7.4    Specific recommendations

The following is a summary of the recommendations made by inspectors in relation to assessment:

- The school plan should articulate the school's assessment policy and set out how individual teachers will undertake a variety of assessment techniques in their classrooms. The policy should outline the frequency of assessment, and whole-school practices should be agreed that will ensure that assessment is undertaken as an integral element of the teaching and learning cycle.

- The school's assessment policy should provide for the effective monitoring and recording of children's progress.

- A systematic approach to assessment is required that will facilitate the regular collation of information concerning the progress of all pupils.

- The outcomes of assessment should inform classroom planning and the implementation of systematic teaching programmes that focus on skill and concept development in literacy and numeracy and provide feedback on pupils' learning and the effectiveness of the implementation of literacy and numeracy programmes.

- There is a need to link target-setting at individual pupil level and class level, the achievement of curricular objectives in literacy and numeracy, and an effective monitoring and assessment procedure.

- Scores on standardised tests should be analysed and discussed on a whole-school basis. Children's results on these tests and teacher-devised tests should be the focus of strategic initiatives throughout the school and would thus facilitate more effective approaches to curriculum differentiation.

- Professional development courses in formative assessment practices, which research has identified as enhancing the quality of learning of low-achievers, should be provided for all teachers in disadvantaged schools.

*Good practice in mathematics lessons is associated with purposeful planning, well-structured learning activities, the use of a range of suitable methodologies and coherent approaches to pupil assessment.*

# 8 Main Findings and Recommendations

This chapter presents the main findings and recommendations of the evaluation of literacy and numeracy.

## 8.1 Main evaluation findings

### 8.1.1 Strategic school leadership and management

The scale of low achievement in both literacy and numeracy that has been highlighted by this evaluation has clear implications for boards of management, for school principals, and for in-school management teams. Their central leadership task must be to promote and develop a culture of change and improvement. Boards of management, principals and in-school management teams must articulate a clear strategy for improving standards, and this approach must be communicated to the school community. This task places demands on the boards of management, on the principals, and on teachers with special-duties posts. Particular difficulties are faced by school principals of smaller schools serving areas designated as disadvantaged who are allocated full-time teaching duties in addition to their school leadership role.

The majority of principals reported that there was a special-duties post in the school related to literacy and numeracy, and the hope was expressed that these postholders would help to guide changes in teaching methodologies. However, although these posts exist, very few schools involved in the evaluation have assigned specific responsibilities to teachers related to the development of effective approaches in teaching and learning or effecting improvements in literacy and numeracy. The potential of principals and in-school management teams to provide curriculum leadership and to contribute to the process of whole-school improvement is not fully realised in most schools.

### 8.1.2 Whole-school planning

All schools have addressed the issue of whole-school planning. However, the extent to which schools plan strategically through the identification of school development goals and of teaching and learning priorities is limited, as detailed in chapters 4–6. Many teachers experience a lack of engagement with the planning process, and there is a sense that, in some cases, school plans and policies are compiled because they are required under current legislation rather than as part of a strategic response to the school's real needs. Teachers' planning generally is insufficiently linked to school policies and does not provide the basis for the systematic implementation of teaching and learning programmes required for a very challenging teaching context.

### 8.1.3 Professional development of teachers

The professional development of teachers is an area that requires significant improvement. The majority of teachers interviewed stated that their initial training and education did not prepare them for the challenge of teaching in a disadvantaged setting. This has particular significance, given that almost one-third of the teachers in the sample reviewed had three years' teaching experience or less. Furthermore, many teachers suggested that they were not aware of any courses available that would be of benefit to them in further developing their skills in the teaching of literacy or numeracy.

The continuing professional development of teachers and support staff is not addressed as a central issue at whole-school level, either by boards of management or by the principal and in-school management team. Many schools access support from services such as the Primary Curriculum Support Programme (PCSP), Regional Curriculum Support Service (RCSS) or School Development Planning Support initiative (SDPS). Some Education Centres also provide valuable professional development support. However, teachers' participation is frequently on a voluntary, individual basis. There is a need, therefore, to plan school-based professional development programmes that would support coherent whole-school responses to the particular needs and contexts of each school.

### 8.1.4　Quality of teaching in literacy and numeracy

The individual learning needs of children in schools designated as disadvantaged are such that optimal teaching practices and best-quality planning are required. During the evaluation it was evident that only a few schools acknowledged the necessity of, and gave considerable commitment to, adapting their literacy and numeracy programmes to maximise children's potential. These schools recognised the need to set specific time-related targets as part of the teaching and learning cycle, and they used the results of various assessment instruments to inform their teaching programmes. Some schools sought the support of outside experts and introduced specific programmes aimed at raising literacy and numeracy standards.

However, it was evident from this evaluation that in a significant minority of cases teachers do not consider fully, or may not feel empowered to address, the stages of development of the children whom they teach. Significant concerns were raised regarding the lack of connection between whole-school plans for literacy and numeracy, individual teachers' preparation, and classroom practice in this area. Lesson content and learning activities were frequently organised as common whole-class activities, and materials or activities were not adapted to match pupils' needs and abilities. While inspectors commented favourably on the quality of many individual lessons presented during the evaluation, they concluded that greater attention should be paid to the consolidation of learning and linkage between the strands of the curriculum.

### 8.1.5　Assessment

Most of the evaluative statements made by inspectors suggest that assessment policy and practice are aspects of provision that require significant attention and improvement. While most schools use a variety of assessment tools, the analysis and use of the data gathered is limited. Most schools do not use assessment data to inform the development of suitable teaching programmes, either at whole-school or individual classroom level, nor do they use such data as a means of evaluating the effectiveness of teaching approaches.

While all schools provide some feedback to parents regarding their children's progress, a practice of in-school reporting in relation to assessment outcomes has not as yet been developed. Planned in-school reporting as part of an action planning process can support schools in their move to align curriculum objectives, implement teaching and learning programmes, and employ effective assessment approaches.

### 8.1.6　Parental involvement and school attendance

All the schools realise the importance of involving parents in their children's education and in fostering a culture of school attendance. Many schools have established initiatives, and all avail of support from the Home School Community Liaison (HSCL) service to promote greater parental involvement. However, in the majority of school settings parental involvement remains poor, particularly in the case of parents of children in the middle and senior classes. In more than two-thirds of the class settings evaluated, home-school partnership was identified as an area that required considerable improvement. Furthermore, the significant level of pupil absenteeism has considerable implications for parents, teachers, boards of management, the National Educational Welfare Board, and the Department of Education and Science.

### 8.1.7　Children's achievement

The twelve schools involved in this evaluation have a high proportion of children who perform in the bottom quintile on standardised tests of literacy and numeracy. Recent research findings suggest that this pattern of low achievement is a major challenge also facing other primary schools serving areas designated as disadvantaged. The scale of low achievement of children is worrying. Close to half the children in the schools evaluated had very low scores in reading, while almost two-thirds of children scored at or below the 20th percentile in standardised assessments in mathematics. Data indicate that there is some evidence that the attainment of pupils declines as they progress through primary school, and the attainment of pupils in fifth and sixth classes in literacy and numeracy is particularly low.

The levels of achievement reported in this evaluation indicate that a great many children are leaving primary school with a very poor grasp of mathematical concepts and with low levels of reading ability. The dramatically low achievement levels reported suggest that pupils are not benefiting from their educational experiences. Many children are transferring to second-level schools with very limited prospects. These findings should be of major concern to teachers, school management authorities and policy-makers, given the importance of language competence as a foundation for learning in many disciplines and the central importance of mathematical skills and concepts in engaging with scientific and technical areas of learning at second level.

### 8.1.8　Challenge of addressing low achievement levels

Everyone involved in the work of designated disadvantaged schools must recognise that the significant level of low achievement in classrooms means that teaching and learning approaches must be highly focused on the specific needs of individual children. Textbook-based whole-class teaching does not cater for the needs of these children. Provision in the schools must be characterised by high expectations for all children and an emphasis on improving standards. Members of boards of management, members of the in-school management teams and teachers must be jointly committed to a clearly articulated school mission and to strategic planning procedures that address this central issue. It must also be recognised at school and at system levels that the learning contexts involved require a very high level of teaching expertise and an effective practice framework for teaching that embraces excellence in preparation, high levels of expertise in lesson presentation, highly developed practice in engaging children in learning activities and in consolidating children's learning, and assessment approaches that are integrated systematically with teaching and learning.

## 8.2 Recommendations

### 8.2.1 Planning

- A more systematic, school-based planning process is required to ensure continuity and progression in children's learning. Central to this process is the establishment of specific priorities focused on improvement in literacy and numeracy within the context of a balanced child-centred curriculum. Such priorities should be agreed at whole-school level, and all staff members should include them in their individual planning.

- Teachers and principals should review the influence of whole-school plans on teaching practices and classroom planning. This review should be undertaken as part of the school self-review process. The DES publication *Looking at Our School: An Aid to Self-Evaluation in Primary Schools* should be utilised by school staffs in the process of looking critically at their schools. Schools should ensure that whole-school plans have a stronger influence on classroom practices.

- The principal and in-school management team should take a leading role in sustaining an effective planning process aimed at ensuring clear links between whole-school planning, individual teachers' preparation and their everyday practice in relation to literacy and numeracy.

- Teachers' written preparation should incorporate differentiated approaches to a much greater degree in order to cater for all pupils, including those with special educational needs and learning difficulties. Teachers, in collaboration with learning-support teachers and resource teachers, should set specific targets to cater for the individual needs of children who are experiencing difficulty with literacy or numeracy skills development and draw up action plans for the realisation of these targets.

- The implementation of literacy and numeracy action plans should be monitored and systematically reviewed within the school. An in-school reporting system should be devised through which teachers would report on the extent to which their teaching and learning objectives are being met.

- Additional non-contact time is required in schools to support engagement in whole-school planning, collaboration, and review. It is therefore suggested that all the education partners should give consideration to ways in which time can be made available for essential collaborative planning in schools.

### 8.2.2 Teaching approaches and methodologies

- An effective framework for teaching and learning that includes excellence in classroom planning, high levels of expertise in lesson presentation, highly developed practice in engaging children in learning activities and in consolidating children's learning and assessment approaches that are integrated systematically with teaching and learning should be promoted and developed in schools serving areas of disadvantage.

- Teachers should devote more attention to the revision and consolidation of learning and to assisting pupils in linking concepts and knowledge between the strands of the curriculum.

- The development of higher-order thinking skills should be addressed further in both literacy and numeracy.

- Schools should ensure that there is a wider range of reading materials in the middle and senior classes and should place greater emphasis on reading for pleasure and information.

- A significant number of schools should create a "mathematics-rich" environment in the classrooms and employ concrete materials to a much greater extent in the teaching of numeracy.

- Schools should ensure much greater collaboration between class teachers and teachers providing supplementary teaching in the implementation of differentiated approaches and in the preparation and implementation of an individual profile and learning programme (IPLP) for each child who receives supplementary teaching. Supplementary support for children in literacy and numeracy should be provided in the context of an integrated and co-ordinated educational experience for children.

### 8.2.3 Assessment and children's achievement

- The effective assessment of children's learning and of teaching methodologies should be viewed as a key professional skill for teachers.

- The various support services, including the School Development Planning Support (SDPS) initiative and the Primary Curriculum Support Programme (PCSP), together with the Department of Education and Science, the National Council for Curriculum and Assessment, and relevant agencies, should provide more co-ordinated guidance to schools in relation to strategies that can impact on pupils' learning and achievement.

- Schools need more support in areas such as classroom-based assessment, the interpretation of standardised test results, and the identification of learning difficulties, particularly in mathematics.

- Clear reporting structures should be established in schools so that the outcomes of assessment can be communicated effectively to pupils, parents, teachers, and the school management.

- In monitoring pupils' progress in literacy and numeracy, schools should map clearly how children are progressing from year to year, and this information should be used at whole-school level to ensure that teaching programmes can enable each child to achieve to the greatest extent possible. Such data would also enable policy-makers to assess the effectiveness of intervention programmes designed to tackle serious literacy and numeracy difficulties, and to direct resources to the areas with greatest need.

- Classroom planning should focus clearly on the expected outcomes of learning. Assessment modes should provide information on the actual outcomes of learning. This information should be used as a basis for a whole-school evaluation of teaching approaches and should focus on how children learn.

### 8.2.4 Learning-support provision

- Schools should review existing learning-support policies to ensure that school policy and practice take account of pupils' needs in both literacy and numeracy. Learning-support teachers should collaborate with class teachers in the development of learning programmes for pupils in addition to the provision of direct supplementary teaching where necessary.

- Learning-support provision for pupils with very low achievement in mathematics should be provided in all schools. The provision of high-support programmes, as recommended elsewhere in this report, will help to reduce the need for learning support over time. Where disadvantaged schools can demonstrate an inability to provide learning support in mathematics because of the size of the case load for learning support in English, the Department of Education and Science should consider what further supports need to be put in place in the school.

### 8.2.5 Attendance

- Schools should urgently address the development of focused attendance strategies, as required under section 22 of the Education (Welfare) Act, 2000. Schools should systematically monitor and report on children's attendance, devise strategies that identify, at an early stage, children who are at risk of developing school attendance problems, and establish closer contacts with the families concerned.

- The National Educational Welfare Board should collaborate with schools in disadvantaged areas in the development of effective responses to the serious levels of absenteeism that affect some schools. Parents should be made aware of the requirement to send their children to school, and schools should be supported in the development of a culture of attendance in their school communities. An information note for parents explaining the effects of absenteeism should be published and disseminated.

- The Home School Community Liaison Scheme has an important role to play in supporting schools in the development of effective school attendance strategies and in promoting the development of a culture of attendance.

### 8.2.6 Parental involvement

- Schools should explore ways of supporting parents in becoming more fully involved in the education of their children. Case studies highlighting successful initiatives by schools in relation to the involvement of parents in their children's education should be published by the Home School Community Liaison (HSCL) service and disseminated to all schools.

- The Home School Community Liaison (HSCL) service should build on the proven success of initiatives to involve the parents of younger children and should extend these strategies to enable parents to engage effectively with the school as their children progress through the middle and senior classes.

- The further development of community education programmes that can impact on literacy levels among parents and families in areas designated as disadvantaged should be provided. The advice of the HSCL service should be sought in the development of courses that would enable parents to support their children's educational development.

### 8.2.7 Early education

- The lessons learned from the Early Start initiative should inform the future development of community-based pre-school provision for all children in areas that are designated as disadvantaged. This provision should focus on oral language development and the conceptual development of young children.

- Community initiatives focusing on early childhood care and education should be further developed in order to provide opportunities for the development of the language and communication skills of very young children.

- The DES should consider the provision of speech and language therapy support for schools with the greatest levels of disadvantage for a defined period. This support would not be aimed at individual pupils: rather, it is intended that speech therapists would work with class teachers and support teachers to develop whole-school programmes to address language deficits, especially in the infant and junior classes, and would operate for a defined period. This would provide schools with opportunities to address language delay, which is believed by teachers to be one of the root causes of the difficulties associated with literacy and numeracy acquisition.

### 8.2.8 Teacher turnover

- The DES should consider issues associated with teacher turnover in disadvantaged schools and provide advice and assistance to schools in the development of strategies to attract and retain experienced trained primary teachers.

### 8.2.9 School management and principal teachers

- Boards of management require specific training that would equip them to play an active role in monitoring the effectiveness of educational provision in their schools.

- A review of the Department's staffing allocation policy in relation to the appointment of administrative principals in schools serving areas with very high levels of disadvantage should be considered, in order to facilitate all school principals in such areas in concentrating on their leadership duties and in engaging in strategic school-planning and management activity on a full-time basis.

- All principals should participate in professional development programmes aimed at developing their competence in strategic leadership and change management.

- Training is required for in-school management personnel that builds their capacity to develop, monitor and implement policies focused on the improvement of teaching and learning.

- There is a need to delegate specific curriculum leadership and whole-school co-ordination responsibilities when drawing up special duties for in-school management team members.

### 8.2.10 Teachers' professional development and external support

- Pre-service and continuing professional development providers should ensure that courses are provided in the teaching of literacy and numeracy and that they incorporate guidance in relation to planning, the quality of teaching, the quality of learning and assessment in the context of educational disadvantage.

- Consideration should be given to developing a central web site or national professional development portal for teachers. Such a facility could be developed by the Teacher Education Section of the Department of Education and Science, in consultation with education centres and in-service education providers. The web site could greatly improve access to information on all professional development courses, including courses focusing on literacy and numeracy. Having identified professional development needs at whole-school level, teachers could access professional development support as part of a strategic school-based response to the development of literacy and numeracy provision.

- Consideration should be given to the extension of intensive high-support intervention programmes, such as Reading Recovery and Maths Recovery, to the schools with the highest proportions of disadvantaged pupils initially, and extending to all designated disadvantaged schools over time. As part of this response, the methodologies underpinning intensive recovery programmes in literacy and numeracy should be disseminated widely. This will enable all classroom teachers and teachers working in a support role to expand their range of teaching approaches and will equip them with the skills necessary to plan and implement systematic programmes in literacy and numeracy.

- Consideration should be given to the establishment of a team of teachers, under the aegis of the Regional Curriculum Support Service, with specific expertise in literacy and numeracy that would provide direct support to designated schools that have prioritised the development of provision for literacy and numeracy. The service should aim to assist school principals in developing strategies aimed at improving children's achievement. It should model appropriate teaching and assessment methodologies in classrooms and should disseminate good practice among learning-support and resource teachers. The support of the service should be available to a school for a defined period.

## 8.3 Conclusion

Through the Primary School Curriculum the education system aims to provide children with a range of learning experiences that is relevant to their present and future needs. In schools designated as serving areas of disadvantage there is a particular challenge if the pattern of low pupil achievement is to be addressed. Quality strategic planning will concentrate on the role of parents, teachers and schools in maximising the potential the curriculum has to offer. The success of teaching and learning strategies requires the explicit prioritisation of literacy and numeracy education in which the most effective use of available physical and human resources is made. A culture of change for improvement is required in order to enhance the quality of children's learning in a developmental and meaningful way.

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